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Alonso Ruiz et al.

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(54) **TOUCH INPUT CURSOR MANIPULATION**

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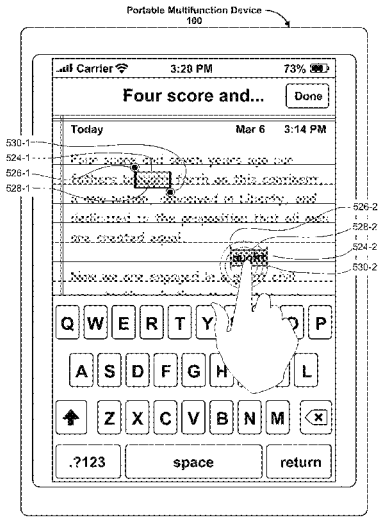
(57) **ABSTRACT**

An electronic device selects content and moves selected content displayed on a touch screen display. Content of an electronic document is displayed, and a selection input corresponding to selection of a respective portion of the content (selected content) is detected. In response, the device concurrently displays the selected content with a changed appearance, to indicate the selection, and a set of options related to the selected content. In response to detecting a single touch input at a location over the selected content, if the single touch input remains, during a first portion of the single touch input, at the location for a predetermined amount of time, followed, during a second portion of the single touch input, by a continuous touch gesture away from the location, the representation of the selected content is moved to a different location in a direction of the continuous touch gesture.

24 Claims, 145 Drawing Sheets



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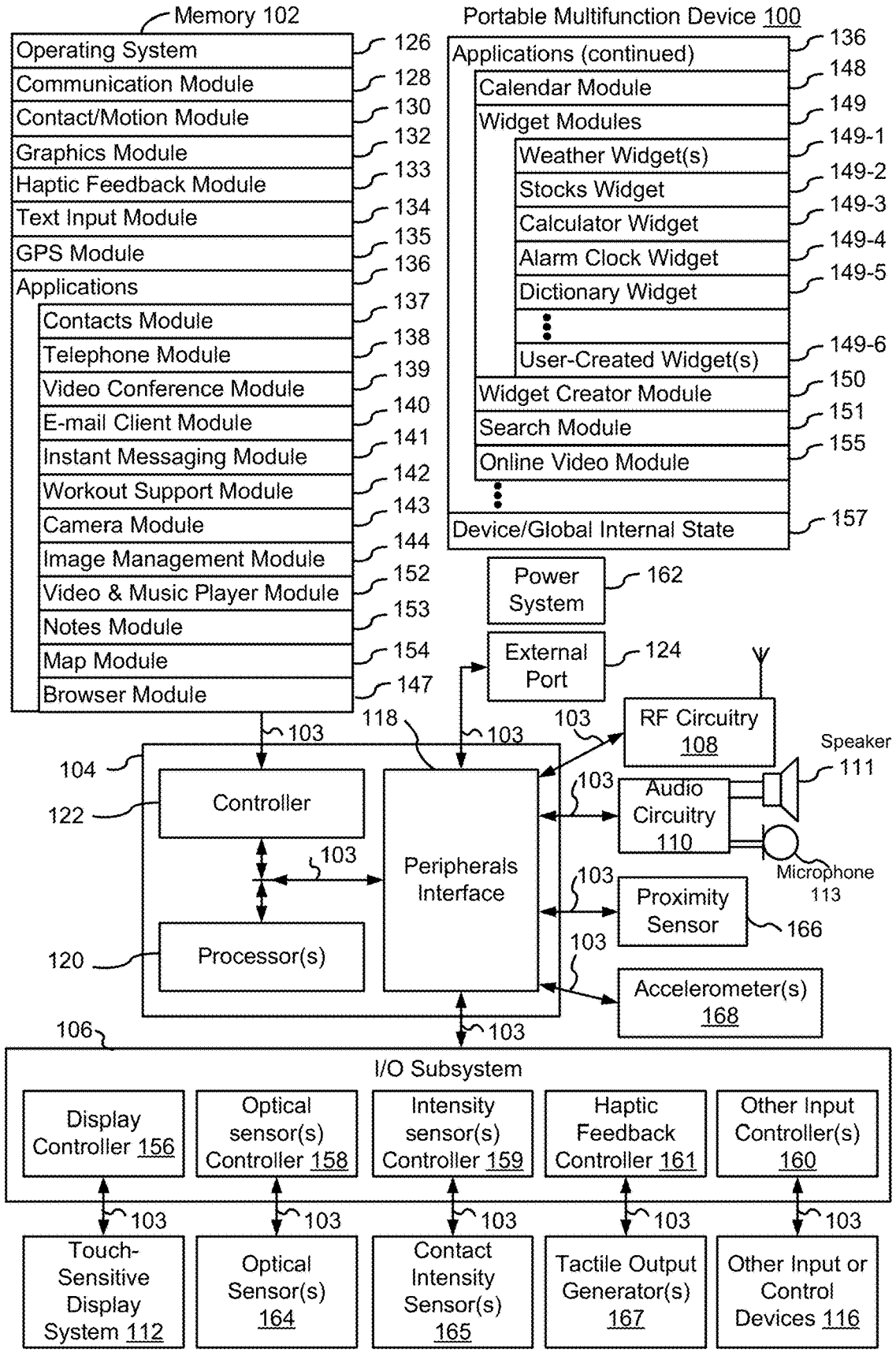
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Communication Module 128
Contact/Motion Module 130
Graphics Module 132
Haptic Feedback Module 133
Text Input Module 134
GPS Module 135
Applications 136
Contacts Module 137
Telephone Module 138
Video Conference Module 139
E-mail Client Module 140
Instant Messaging Module 141
Workout Support Module 142
Camera Module 143
Image Management Module 144
Video & Music Player Module 152
Notes Module 153
Map Module 154
Browser Module 147
Portable Multifunction Device 100
Applications (continued) 136
Calendar Module 148
Widget Modules 149
Weather Widget(s) 149-1
Stocks Widget 149-2
Calculator Widget 149-3
Alarm Clock Widget 149-4
Dictionary Widget 149-5
User-Created Widget(s) 149-6
Widget Creator Module 150
Search Module 151
Online Video Module 155
Device/Global Internal State 157
Power System 162
External Port 124
RF Circuitry 108
Speaker 111
Audio Circuitry 110
Microphone 113
Proximity Sensor 166
Accelerometer(s) 168
Controller 122
Peripherals Interface 118
Processor(s) 120
104
103
106
I/O Subsystem
Display Controller 156
Optical sensor(s) Controller 158
Intensity sensor(s) Controller 159
Haptic Feedback Controller 161
Other Input Controller(s) 160
Touch-Sensitive Display System 112
Optical Sensor(s) 164
Contact Intensity Sensor(s) 165
Tactile Output Generator(s) 167
Other Input or Control Devices 116

Figure 1A

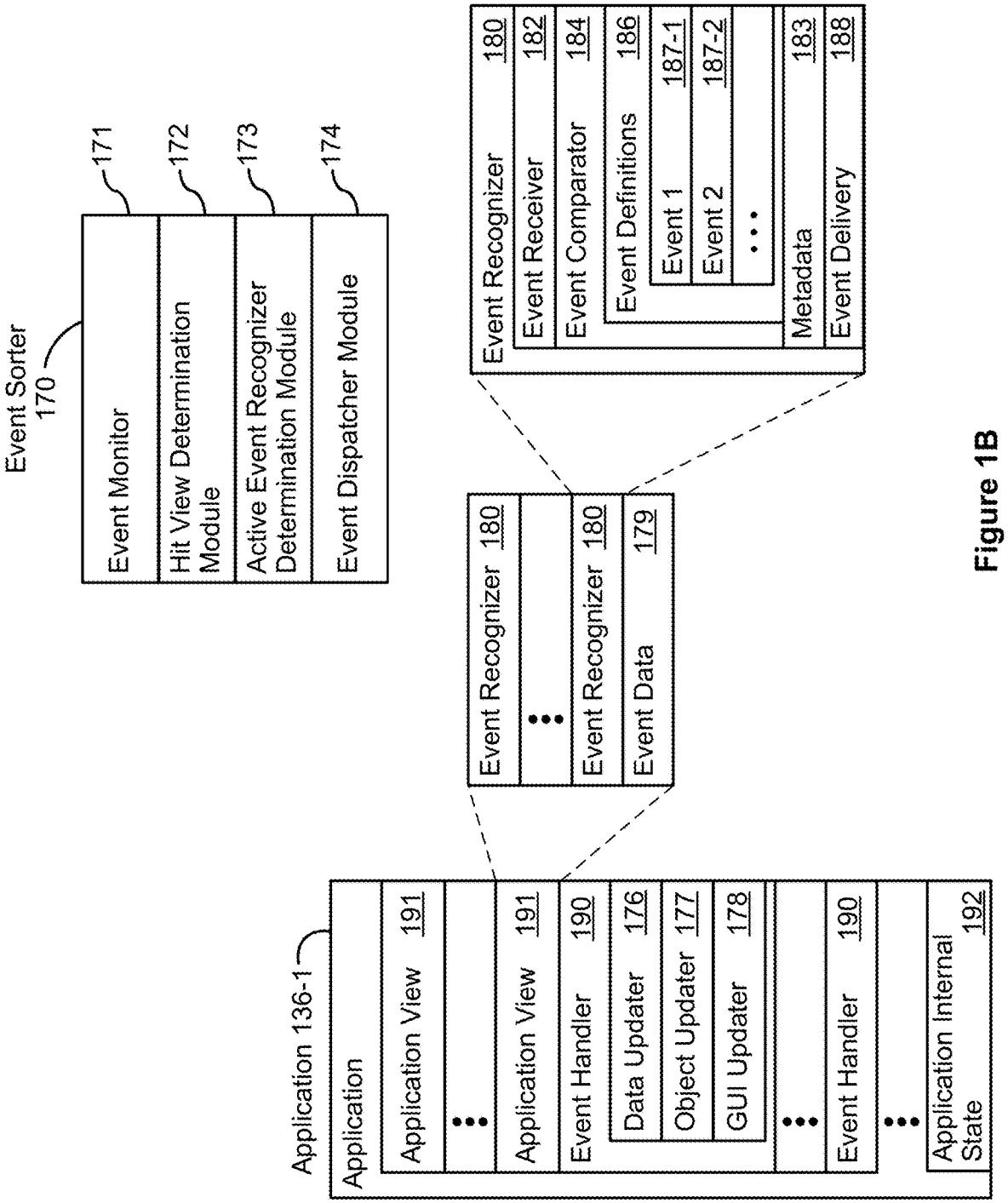
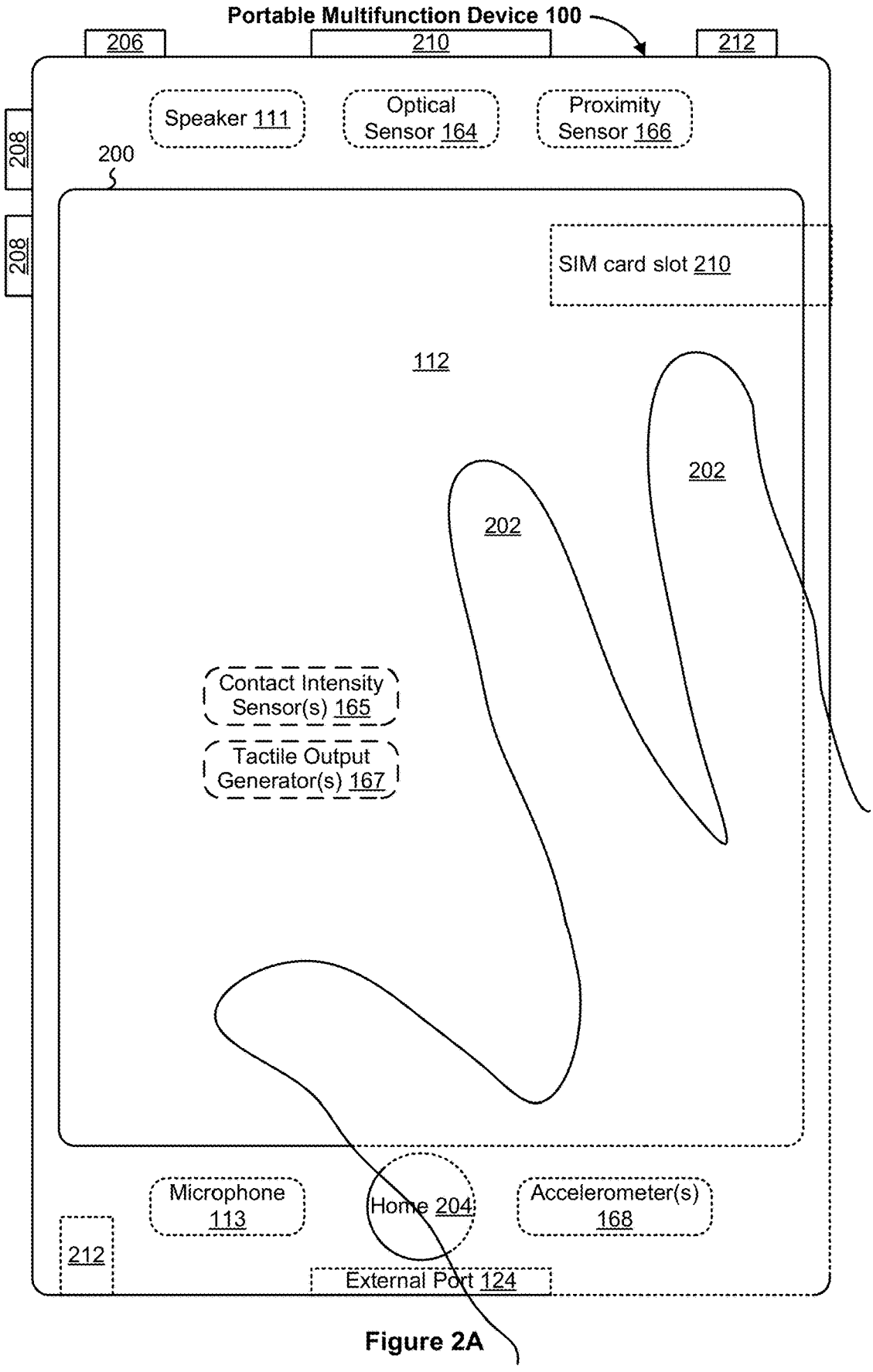

Event Sorter
170
171
Event Monitor
172
Hit View Determination Module
173
Active Event Recognizer Determination Module
174
Event Dispatcher Module
Application 136-1
Application
Application View 191
Application View 191
Event Handler 190
Data Updater 176
Object Updater 177
GUI Updater 178
Event Handler 190
Application Internal State 192
Event Recognizer 180
Event Data 179
Event Recognizer 180
Event Recognizer 180
Event Receiver 182
Event Comparator 184
Event Definitions 186
Event 1 187-1
Event 2 187-2
Metadata 183
Event Delivery 188

Figure 1B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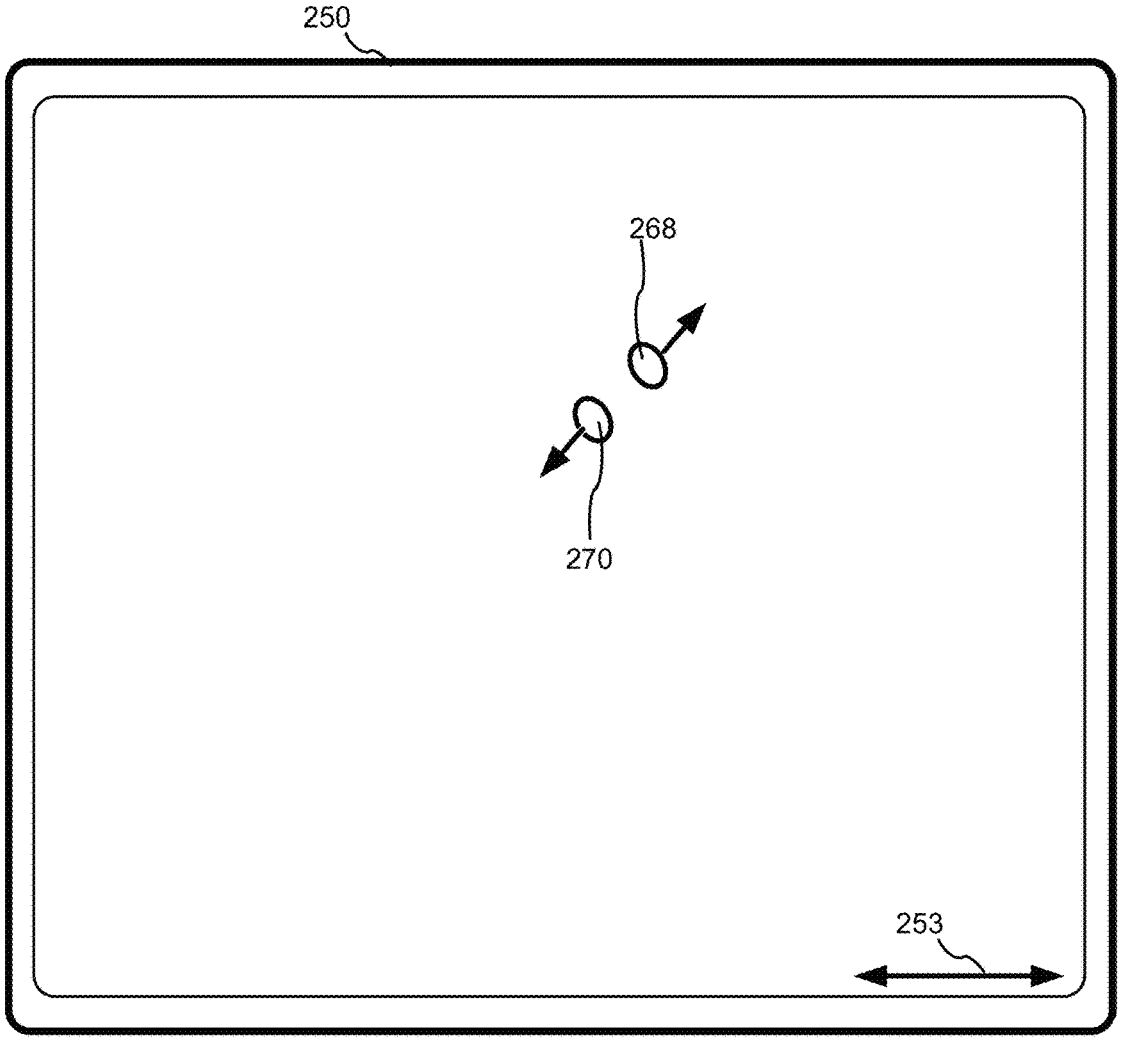
206
210
212
Speaker 111
Optical Sensor 164
Proximity Sensor 166
208
200
208
SIM card slot 210
112
202
202
Contact Intensity Sensor(s) 165
Tactile Output Generator(s) 167
Microphone 113
Home 204
Accelerometer(s) 168
212
External Port 124

Figure 2A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268
270
253

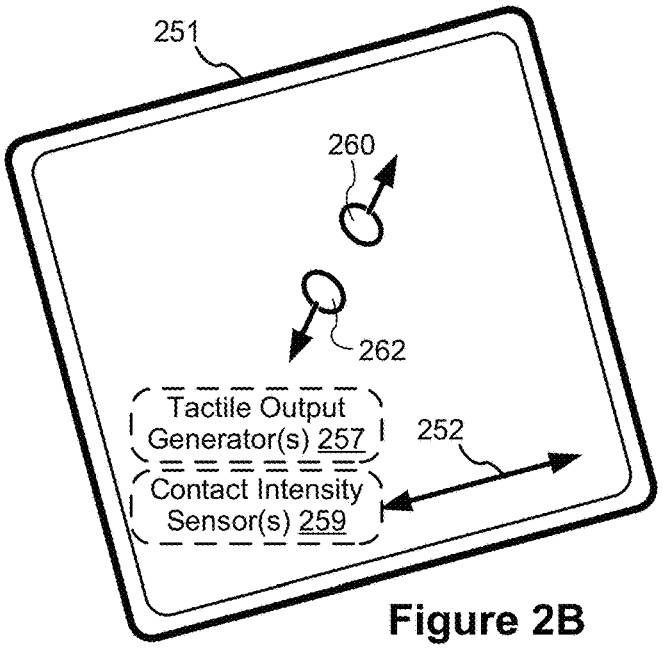

251
260
262
Tactile Output Generator(s) 257
Contact Intensity Sensor(s) 259
252

Figure 2B

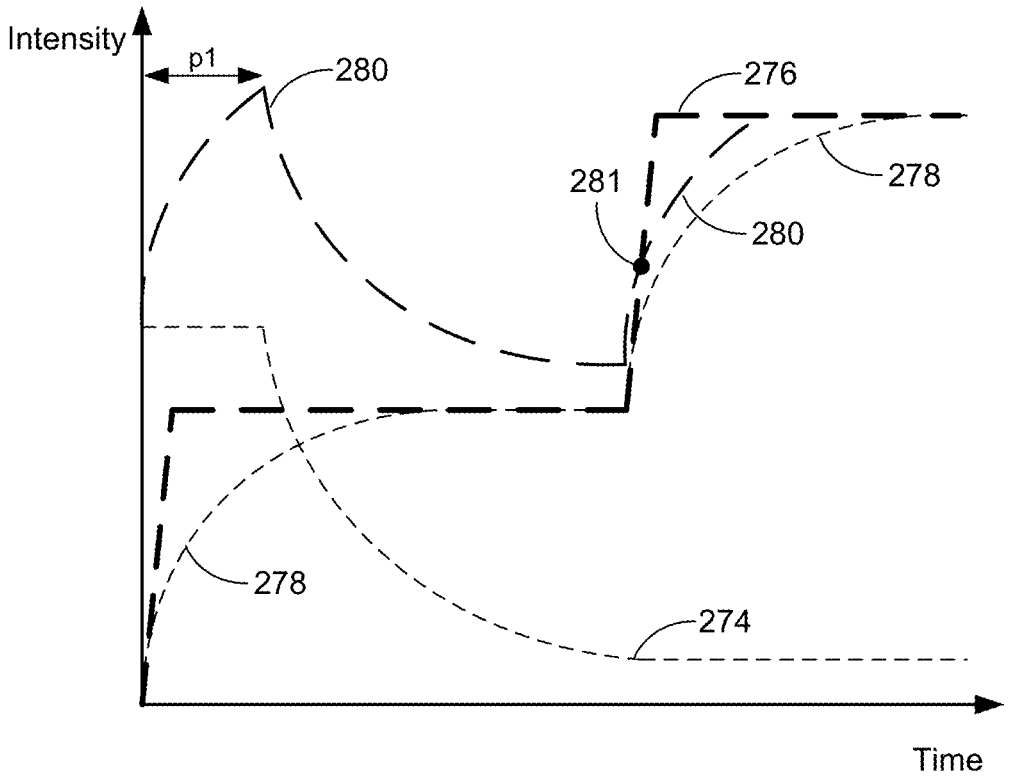


Figure 2C

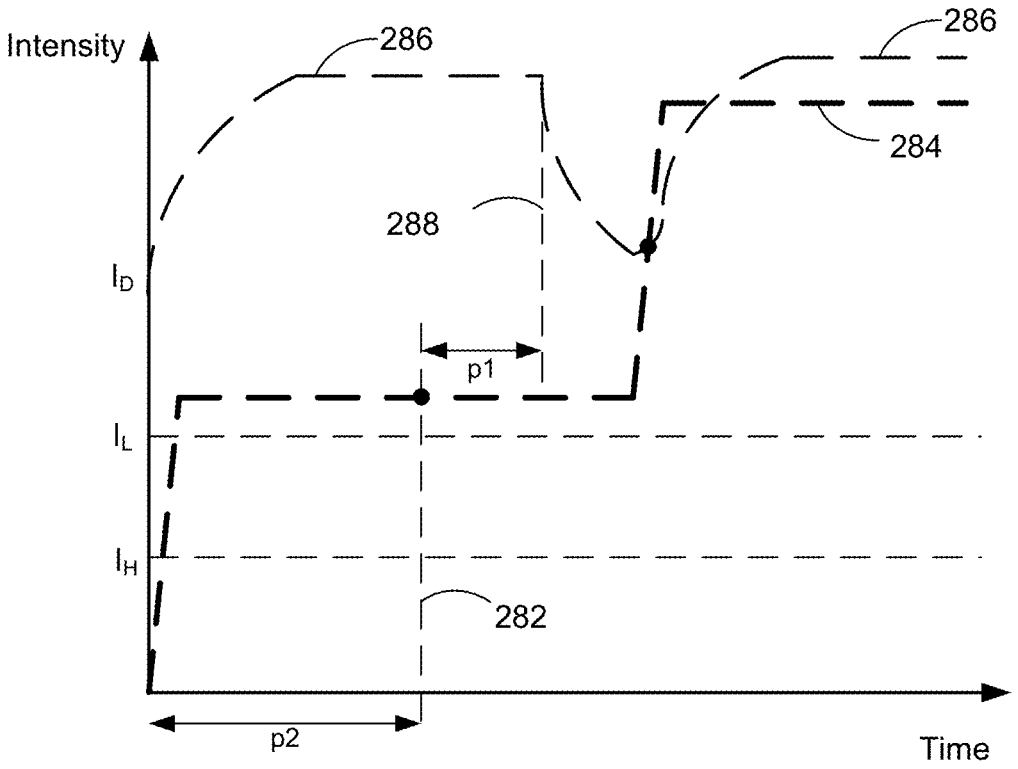


Figure 2D

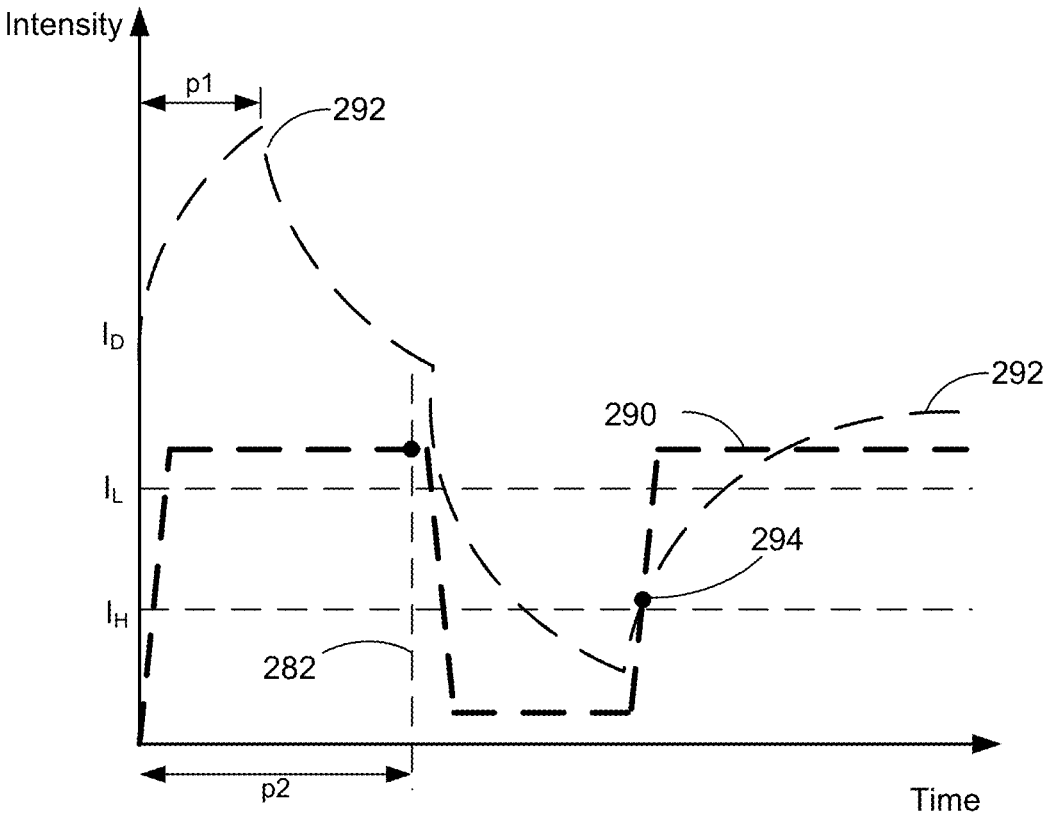


Figure 2E

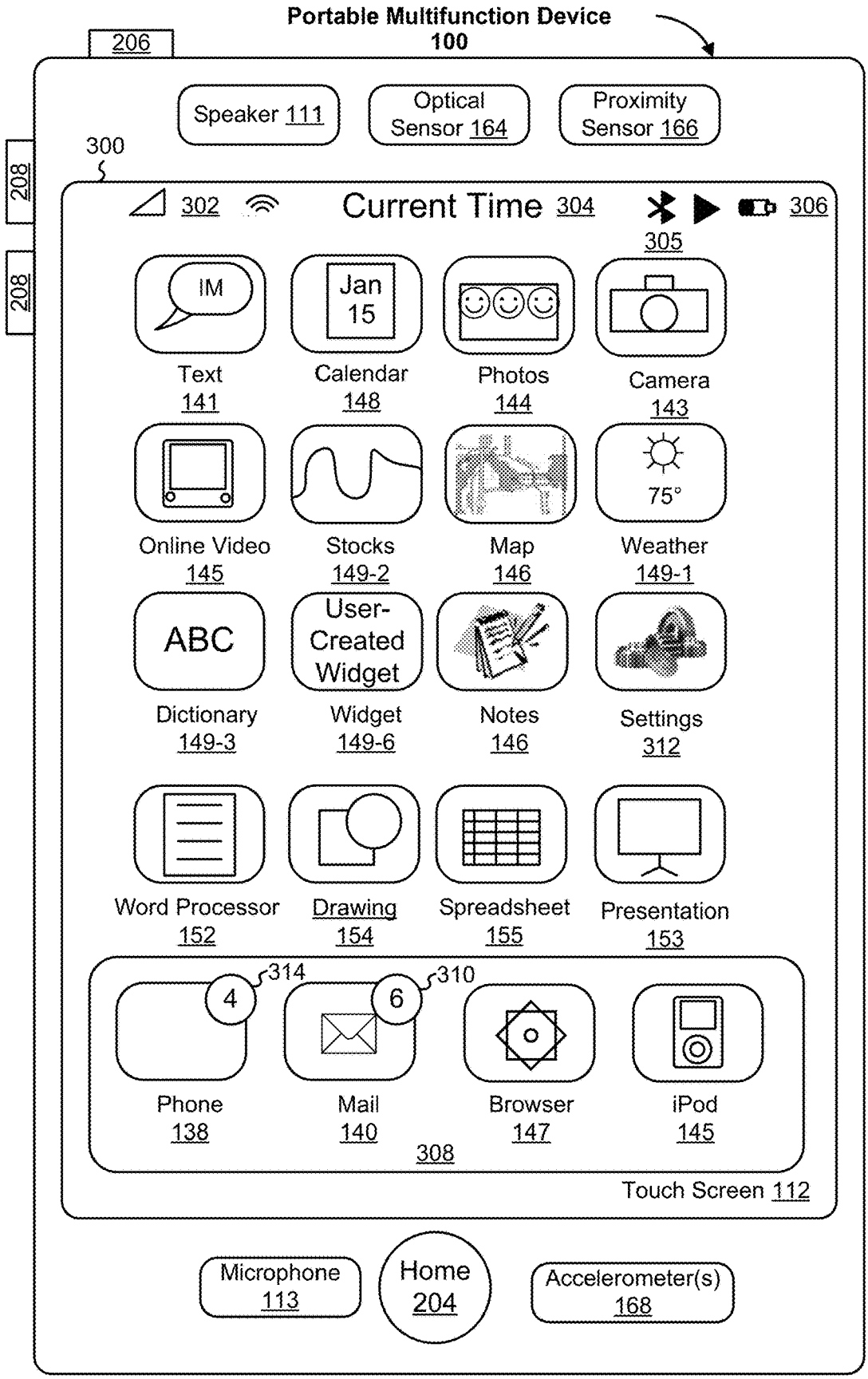

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
300
208
208
302
Current Time 304
306
305
IM
Text 141
Jan 15
Calendar 148
Photos 144
Camera 143
Online Video 145
Stocks 149-2
Map 146
75°
Weather 149-1
ABC
Dictionary 149-3
User-Created Widget
Widget 149-6
Notes 146
Settings 312
Word Processor 152
Drawing 154
Spreadsheet 155
Presentation 153
314
310
4
6
Phone 138
Mail 140
Browser 147
iPod 145
308
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168

Figure 3

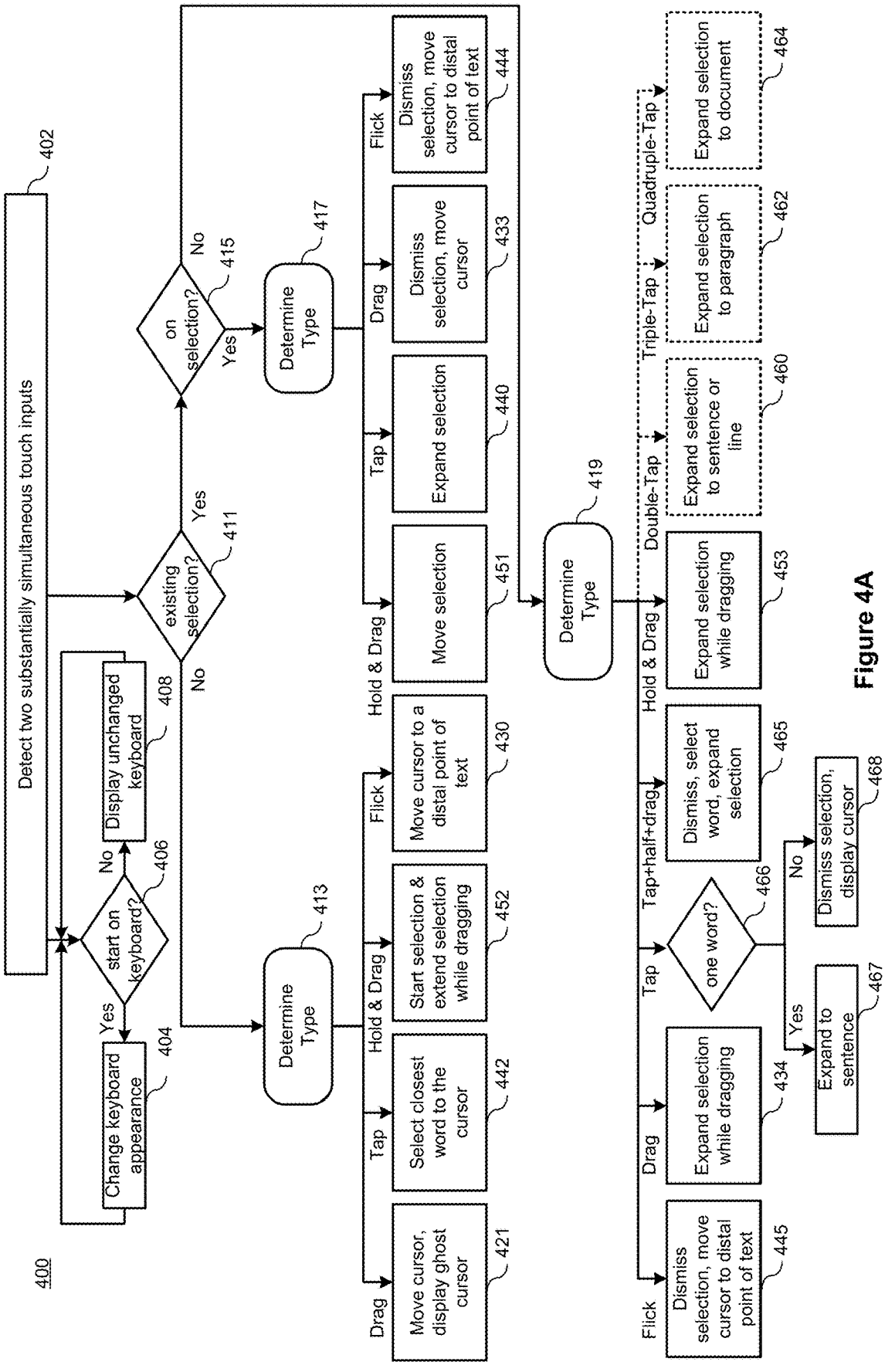

400
Detect two substantially simultaneous touch inputs
402
start on keyboard?
406
Yes
No
Change keyboard appearance
404
Display unchanged keyboard
408
existing selection?
411
Yes
No
on selection?
415
Yes
No
Determine Type
413
Tap
Select closest word to the cursor
442
Hold & Drag
Start selection & extend selection while dragging
452
Flick
Move cursor to a distal point of text
430
Drag
Move cursor, display ghost cursor
421
Determine Type
417
Tap
Expand selection
440
Hold & Drag
Move selection
451
Drag
Dismiss selection, move cursor
433
Flick
Dismiss selection, move cursor to distal point of text
444
Determine Type
419
Double-Tap
Expand selection to sentence or line
460
Hold & Drag
Expand selection while dragging
453
Triple-Tap
Expand selection to paragraph
462
Quadruple-Tap
Expand selection to document
464
Tap+half+drag
Dismiss, select word, expand selection
465
Tap
one word?
466
No
Dismiss selection, display cursor
468
Yes
Expand to sentence
467
Drag
Expand selection while dragging
434
Flick
Dismiss selection, move cursor to distal point of text
445

Figure 4A

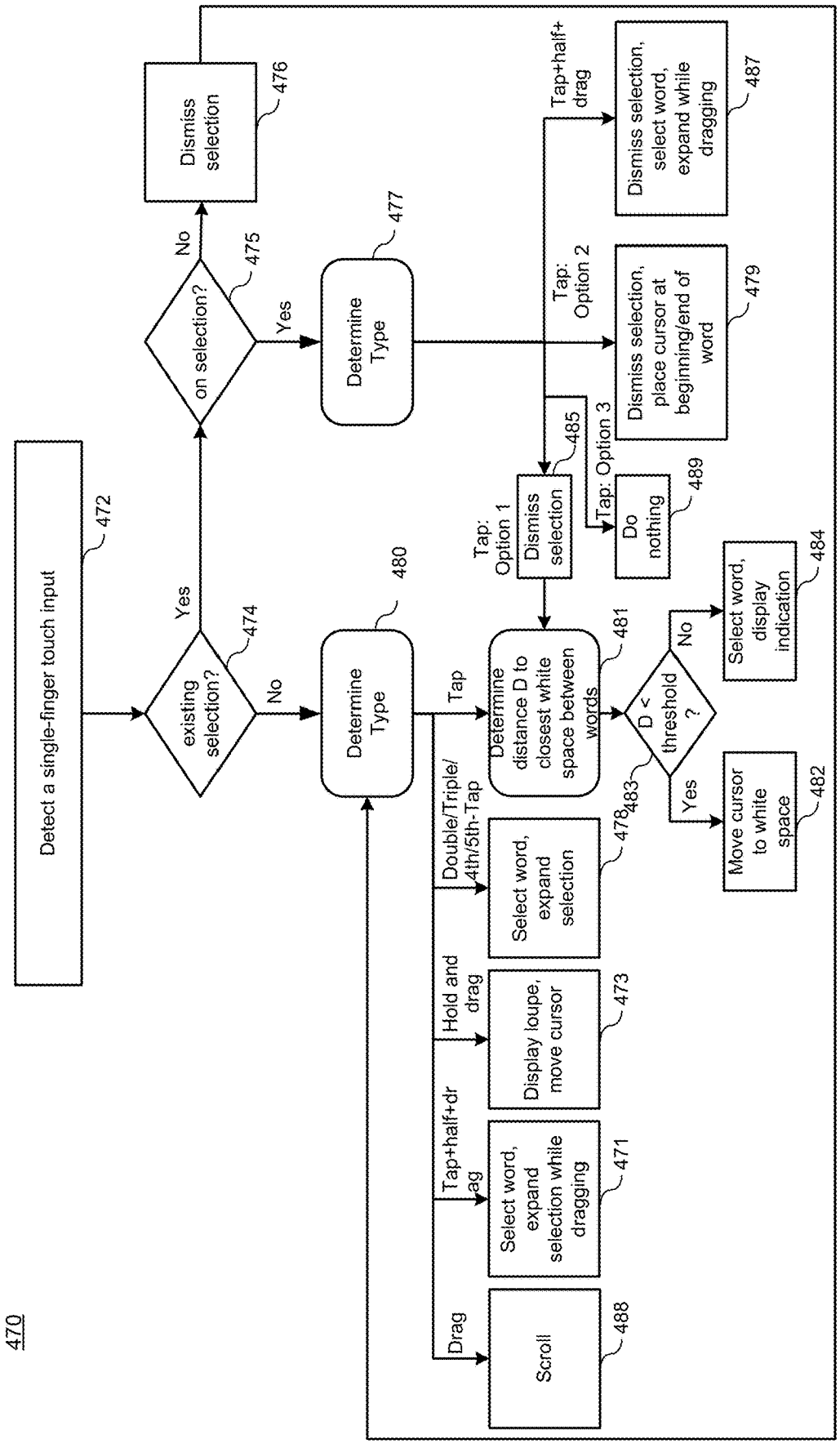

470
Detect a single-finger touch input
472
existing selection?
474
Yes
No
on selection?
475
No
Yes
Dismiss selection
476
Determine Type
477
Determine Type
480
Tap
Double/Triple/4th/5th-Tap
Hold and drag
Tap+half+drag
Drag
Select word, expand selection
478
Display loupe, move cursor
473
Select word, expand selection while dragging
471
Scroll
488
Tap: Option 1
Dismiss selection
485
Tap: Option 2
Tap+half+drag
Tap: Option 3
Do nothing
489
Dismiss selection, place cursor at beginning/end of word
479
Dismiss selection, select word, expand while dragging
487
Determine distance D to closest white space between words
481
D < threshold ?
483
No
Yes
Select word, display indication
484
Move cursor to white space
482

Figure 4B

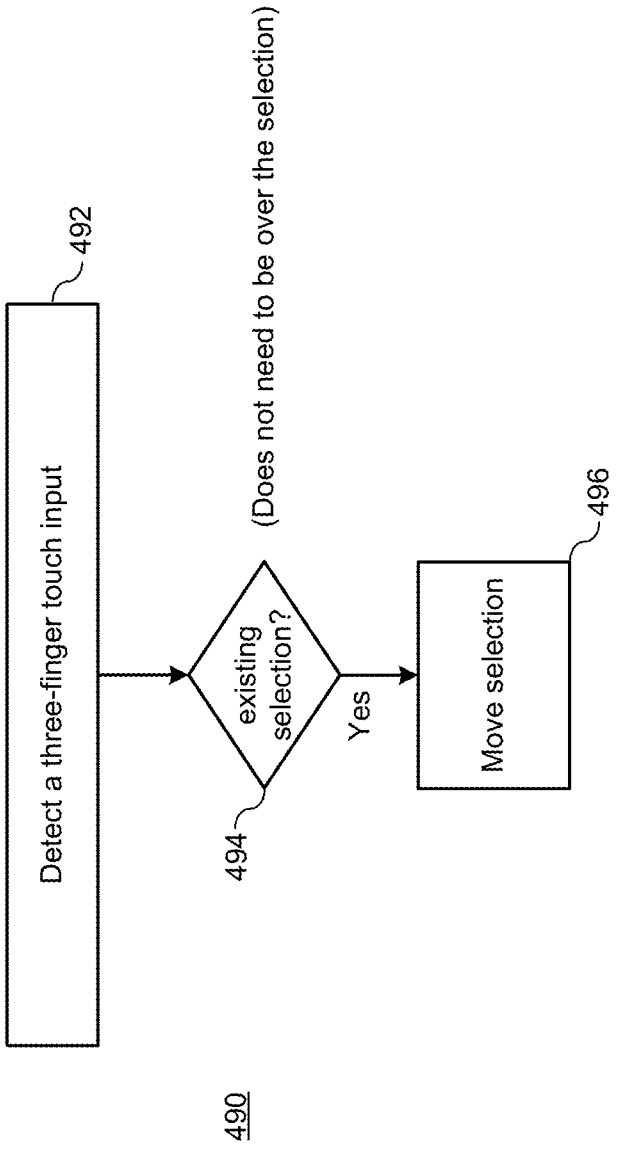

490
Detect a three-finger touch input
492
existing selection?
(Does not need to be over the selection)
494
Yes
Move selection
496

Figure 4C

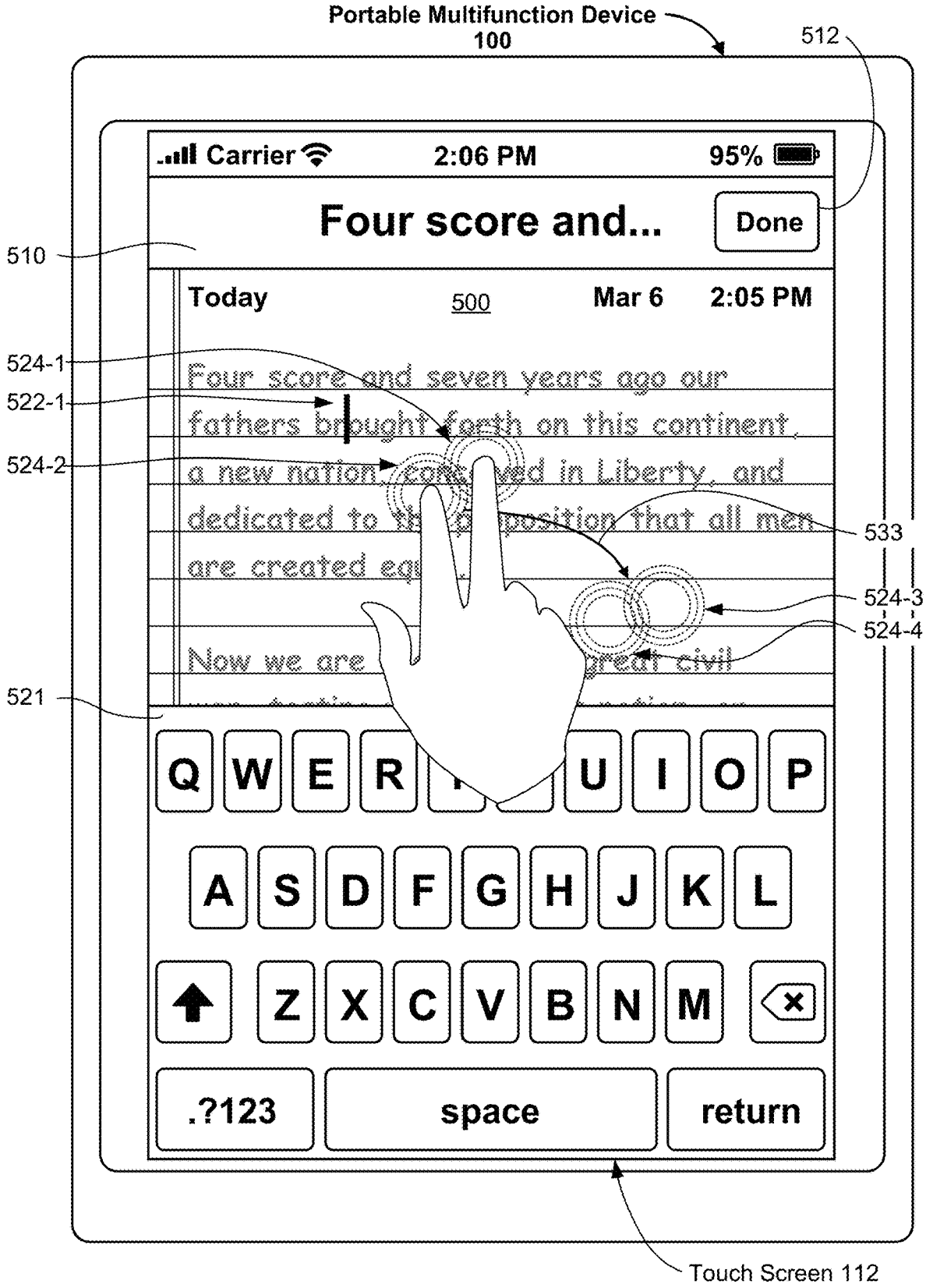

Portable Multifunction Device
100
512
Carrier
2:06 PM
95%
Four score and...
Done
510
Today
500
Mar 6
2:05 PM
524-1
522-1
524-2
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created eq
533
524-3
524-4
Now we are
great civil
521
Q W E R U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5A

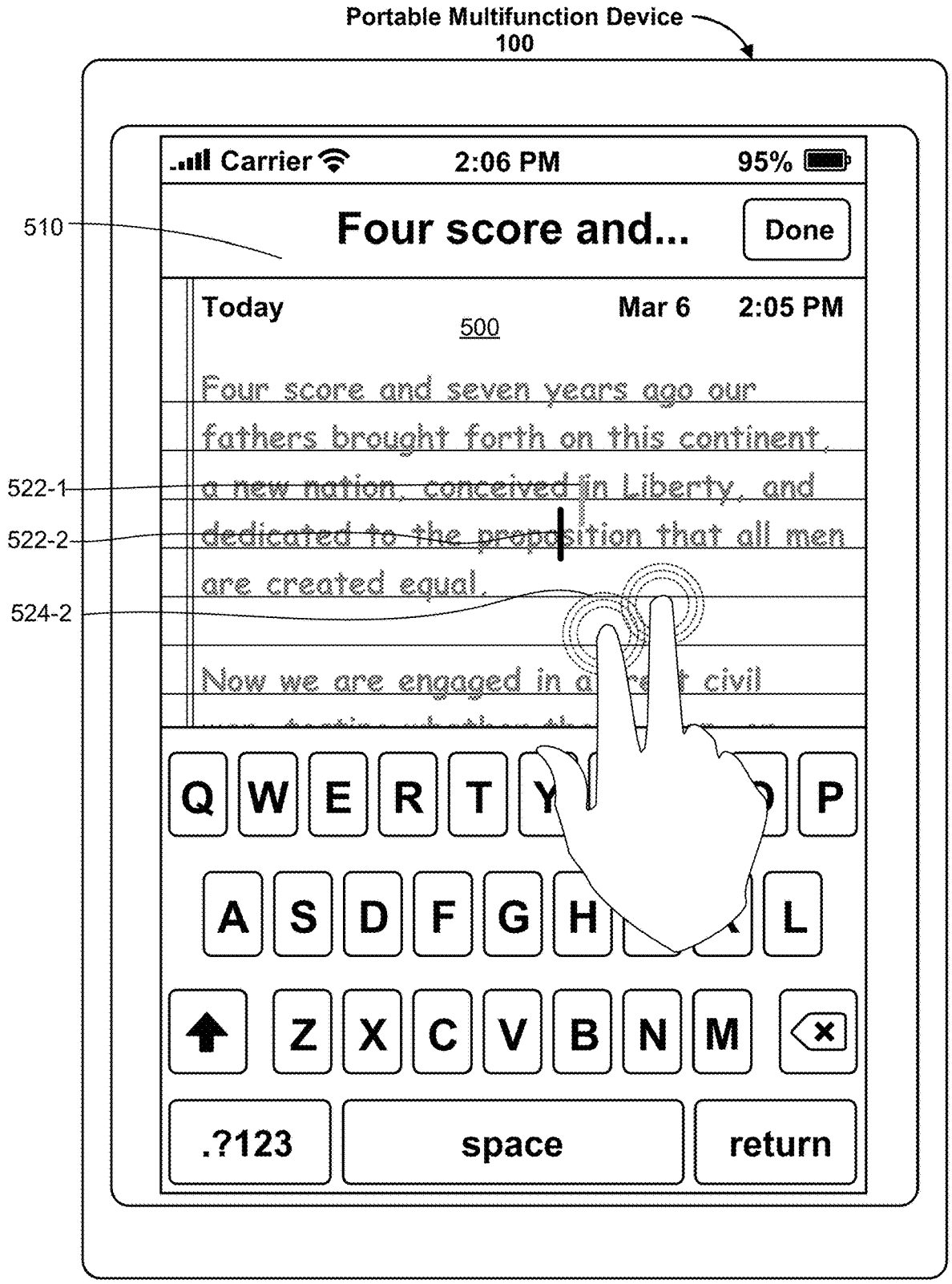
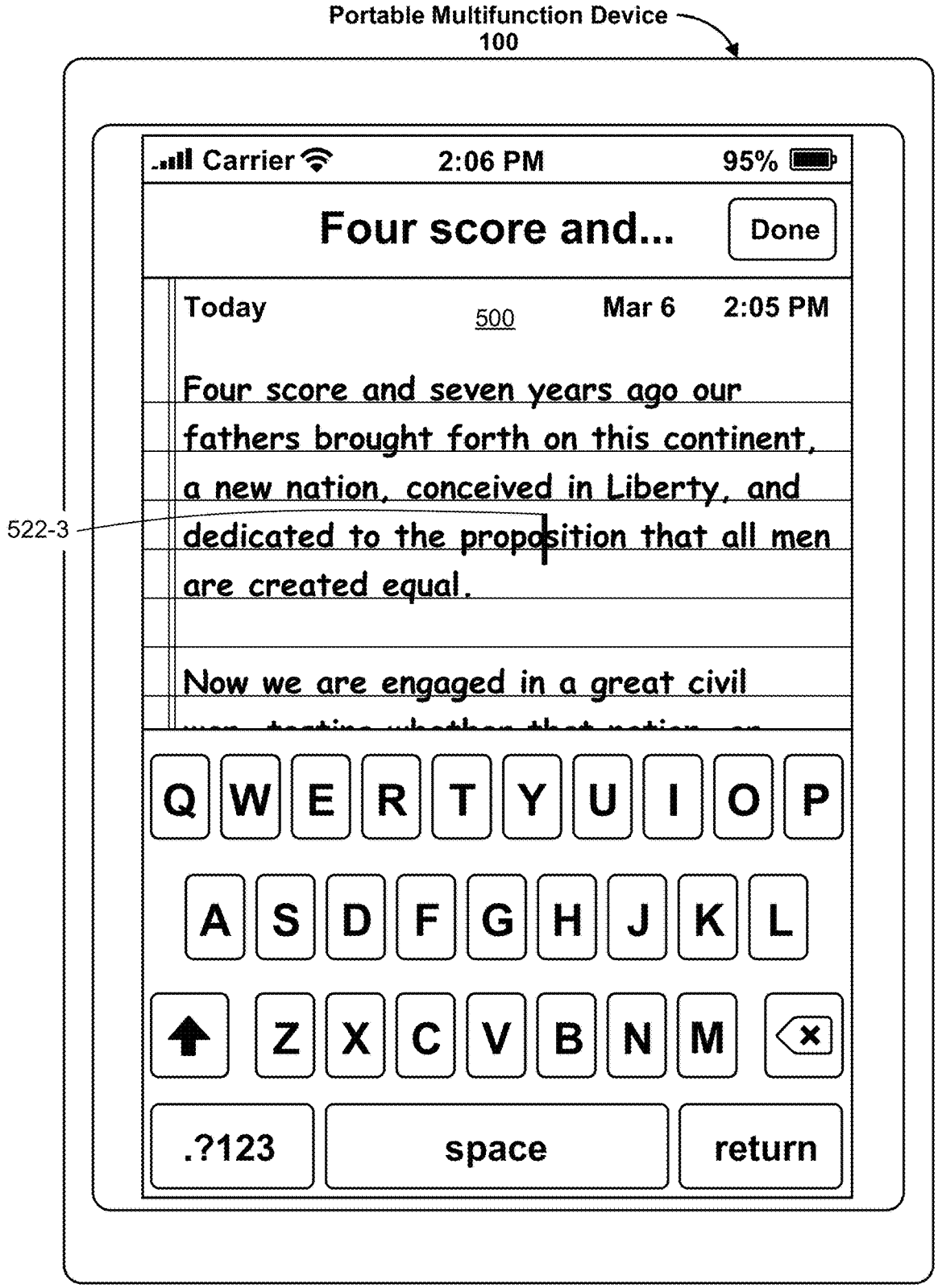

Portable Multifunction Device
100
Carrier
2:06 PM
95%
510
Four score and...
Done
Today
Mar 6
2:05 PM
500
Four score and seven years ago our
fathers brought forth on this continent,
522-1
a new nation, conceived in Liberty, and
522-2
dedicated to the proposition that all men
are created equal.
524-2
Now we are engaged in a
civil
Q W E R T Y P
A S D F G H L
Z X C V B N M
.?123
space
return

Figure 5B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100
Carrier
2:06 PM
95%
Four score and...
Done
Today
500
Mar 6
2:05 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
522-3
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5C

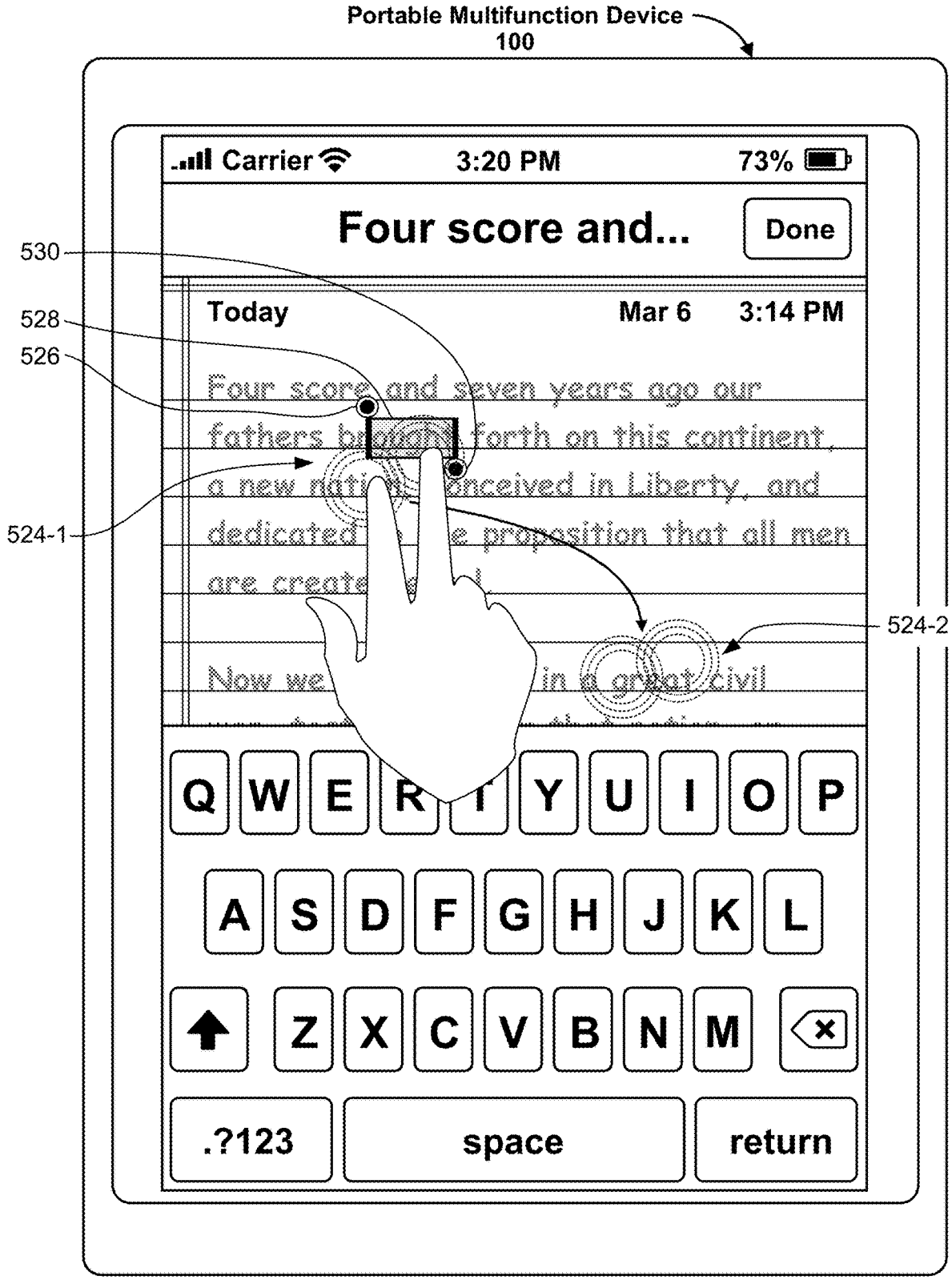
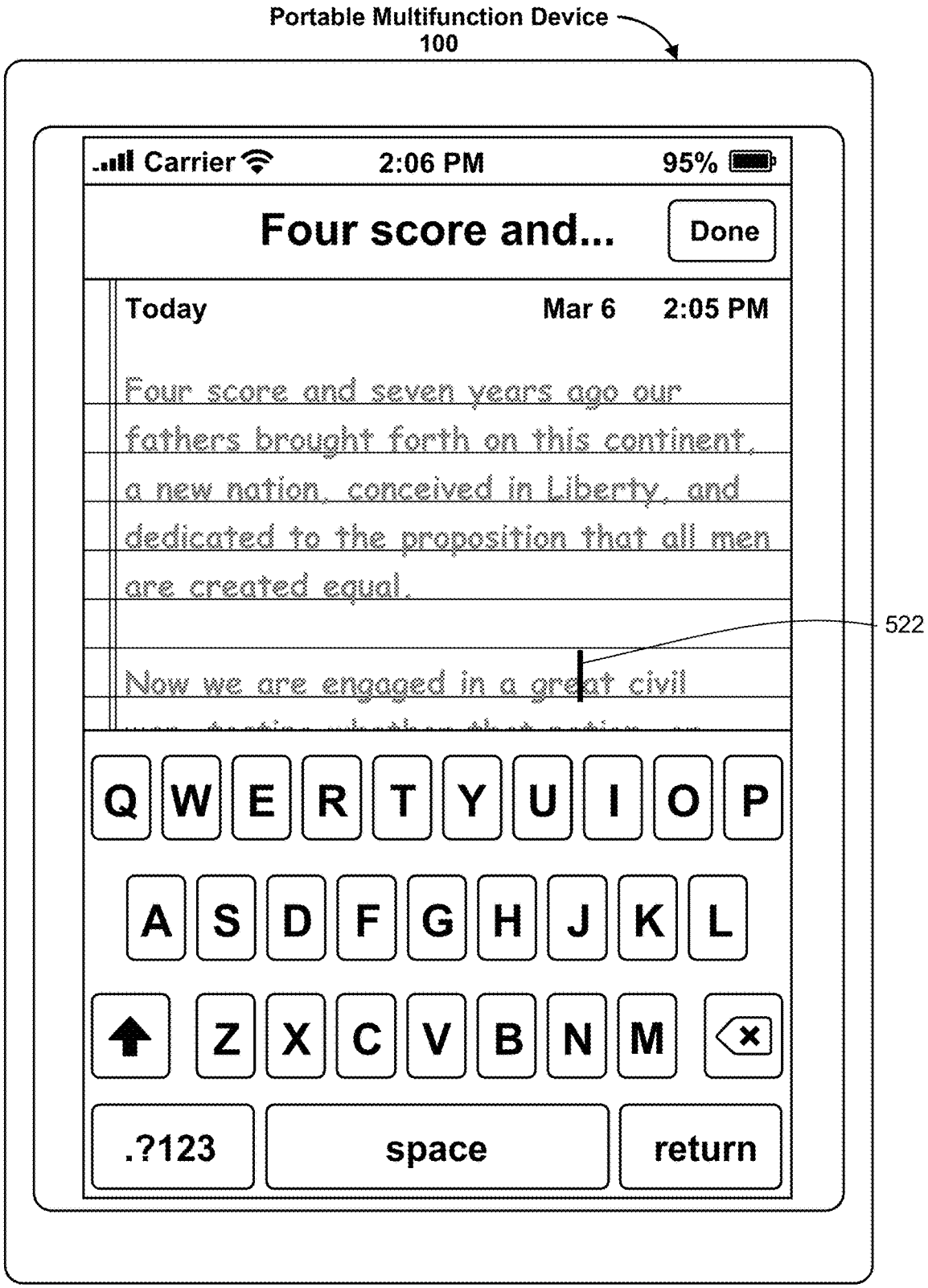

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
530
528
526
524-1
524-2
Today
Mar 6
3:14 PM
Four score and seven years ago our
fathers
forth on this continent,
a new
conceived in Liberty, and
dedicated
proposition that all men
are create
Now we
in a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5D


Portable Multifunction Device
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Carrier
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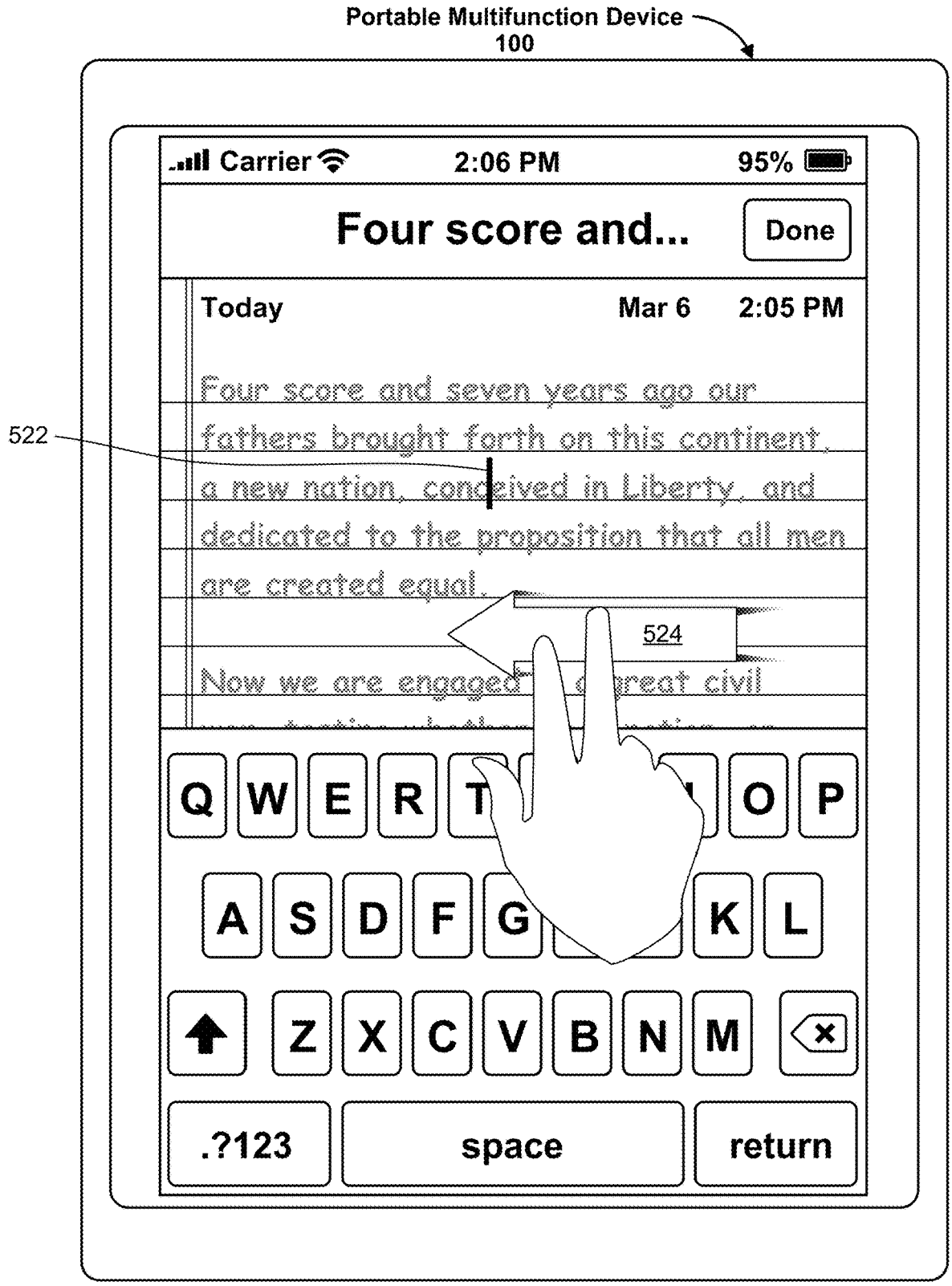
95%
Four score and...
Done
Today
Mar 6
2:05 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
522
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5E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Carrier
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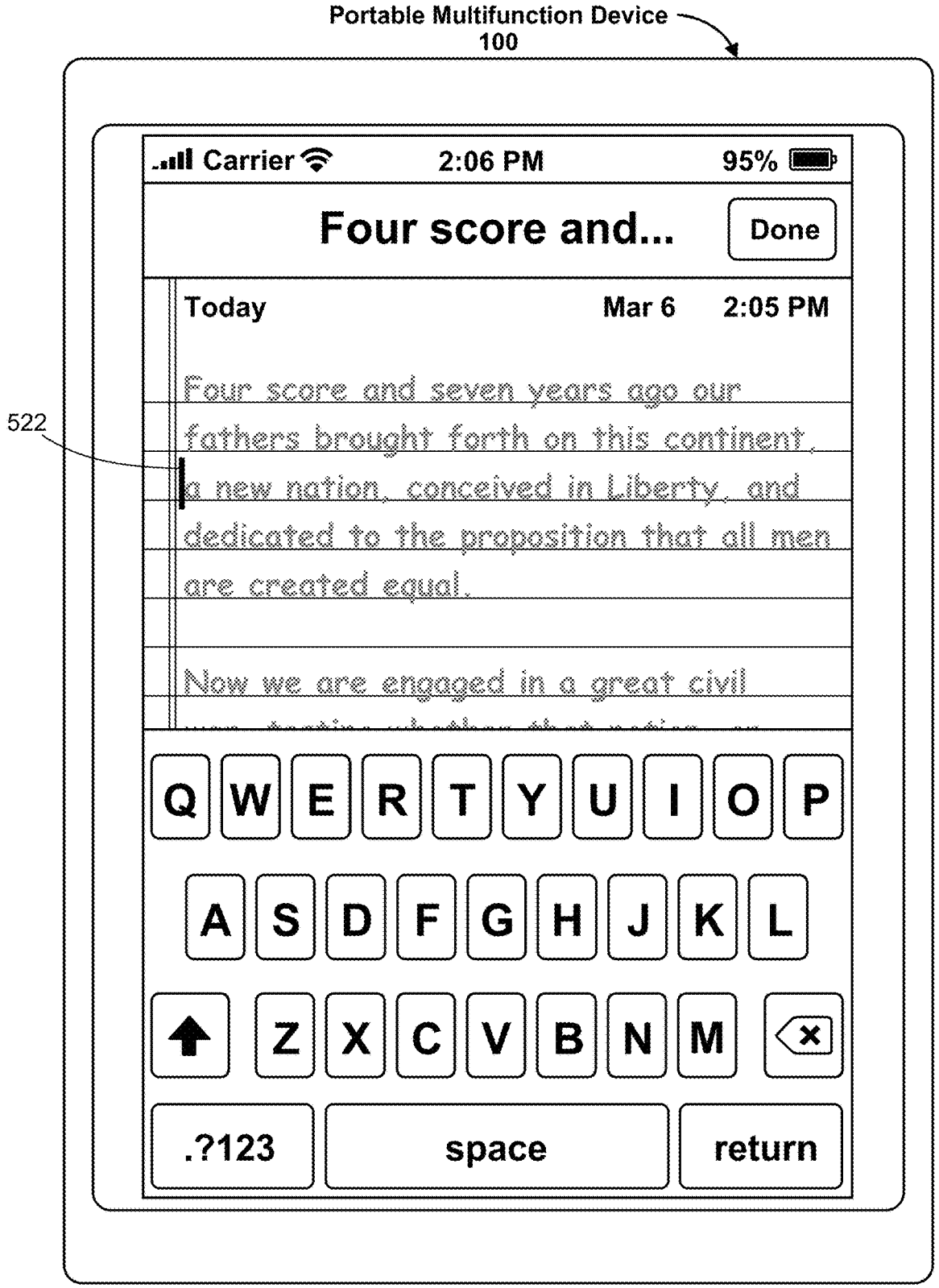
Four score and...
Done
Today
Mar 6
2:05 PM
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
522
524
Now we are engaged
great civil
Q W E R T O P
A S D F G K L
Z X C V B N M
.?123
space
return

Figure 5F


Portable Multifunction Device
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Carrier
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95%
Four score and...
Done
Today
Mar 6
2:05 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
522
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5G

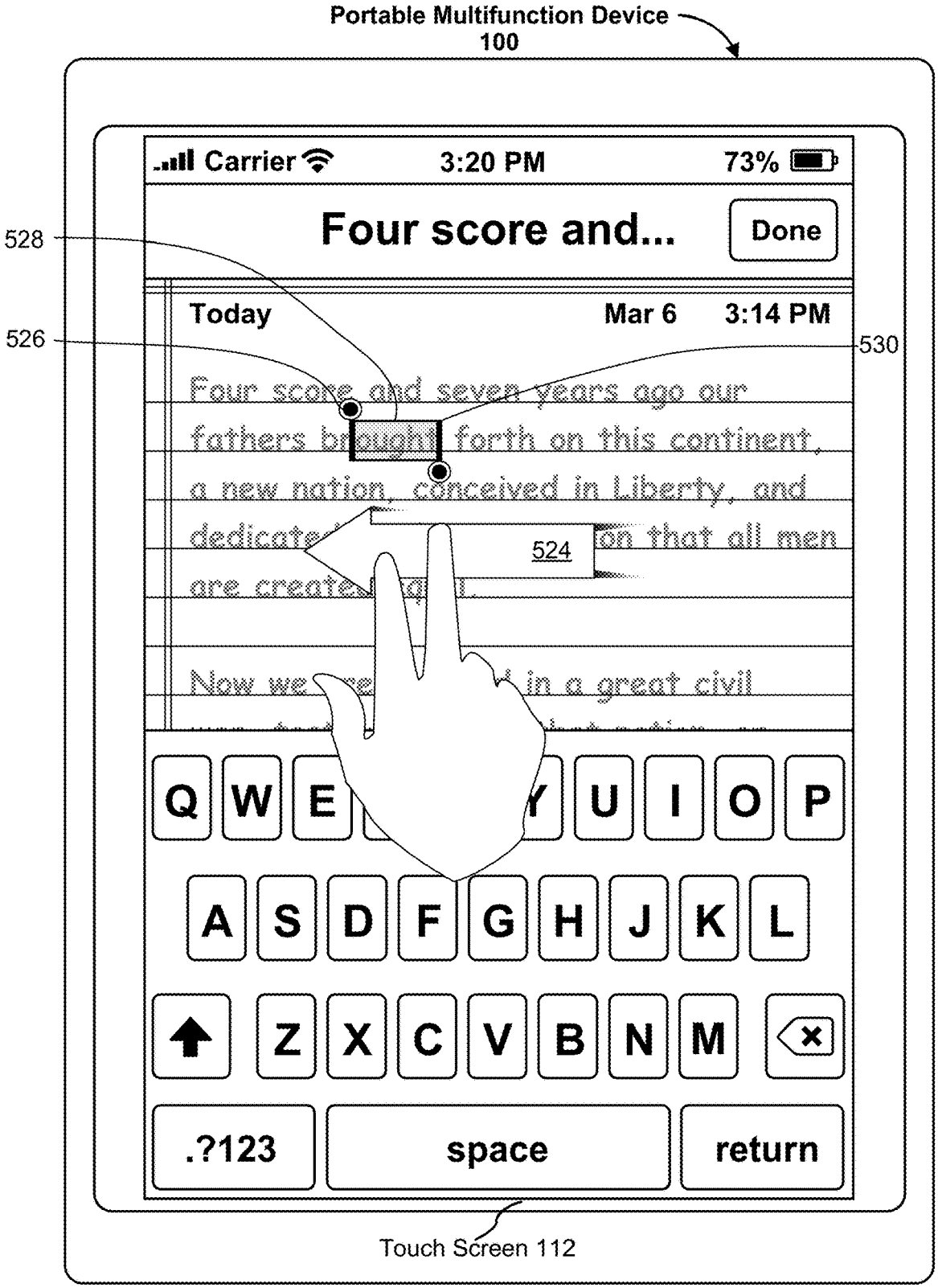
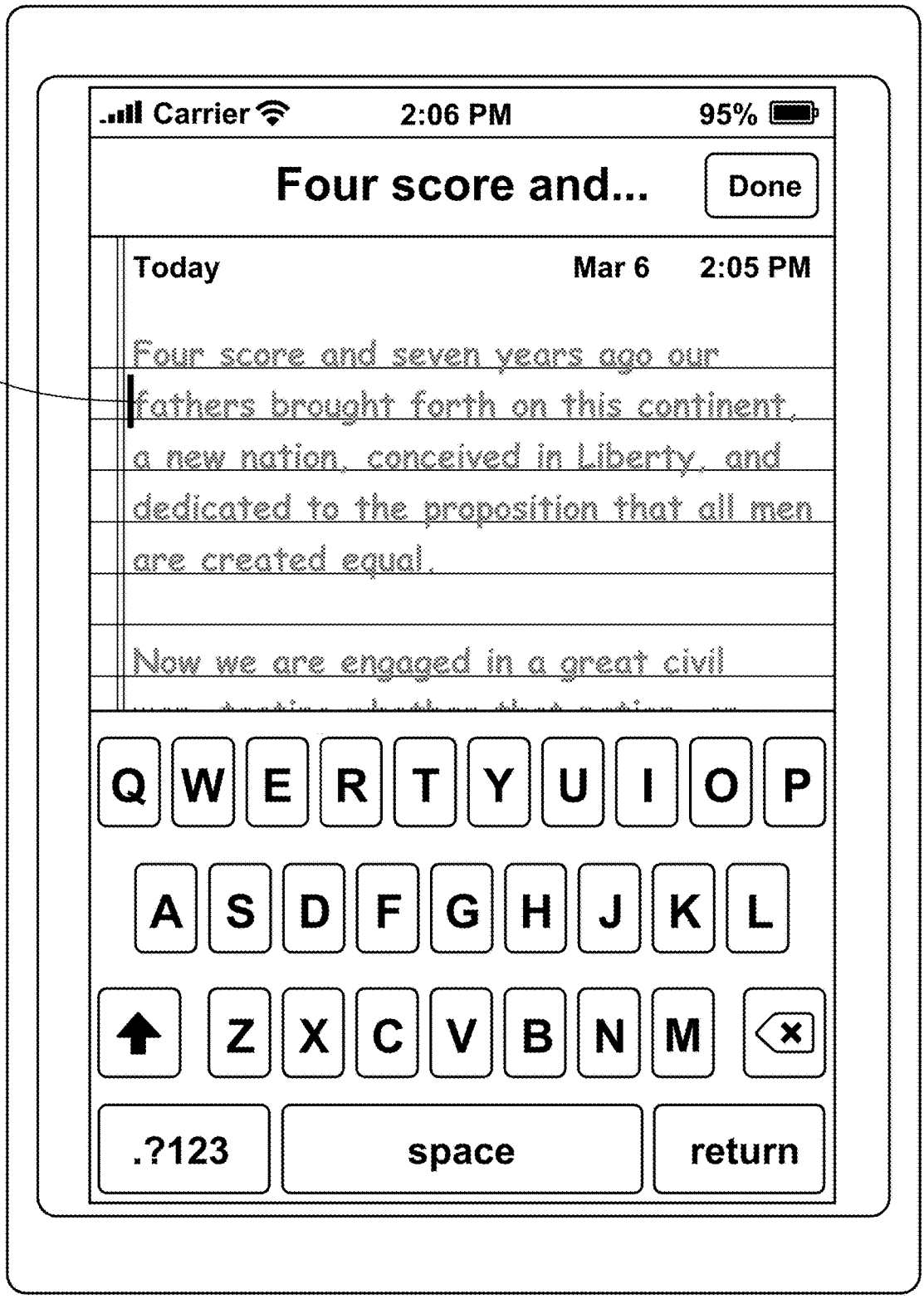

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
528
Today
Mar 6
3:14 PM
526
530
Four score and seven years ago our
fathers b
forth on this continent,
a new nation, conceived in Liberty, and
dedicate
on that all men
are create
524
Now we
in a great civil
Q W E
Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5H


Carrier
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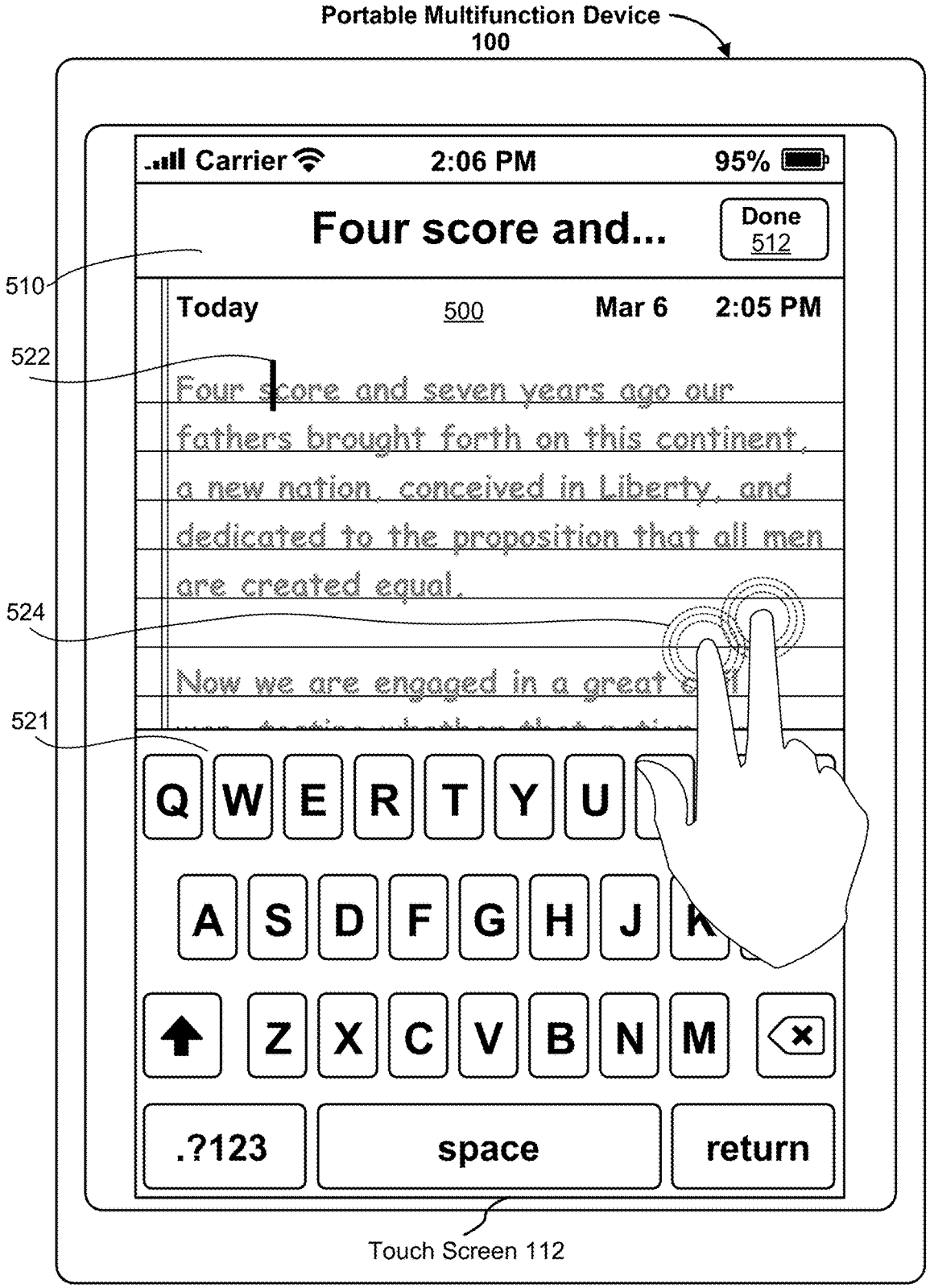
Four score and...
Done
Today
Mar 6
2:05 PM
522
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5I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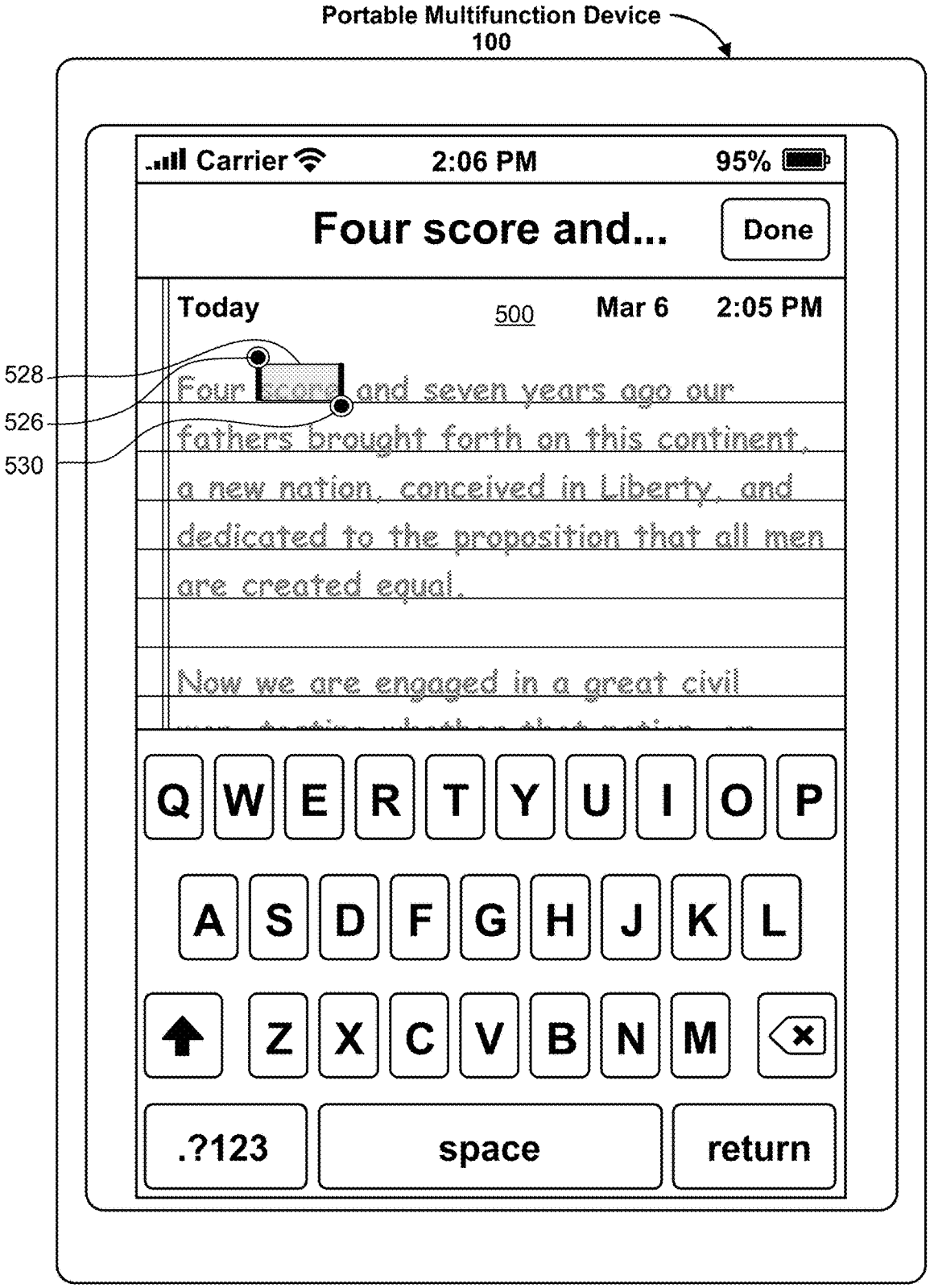
Carrier
2:06 PM
95%
Four score and...
Done
512
510
Today
500
Mar 6
2:05 PM
522
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
524
Now we are engaged in a great
521
Q W E R T Y U
A S D F G H J K
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5J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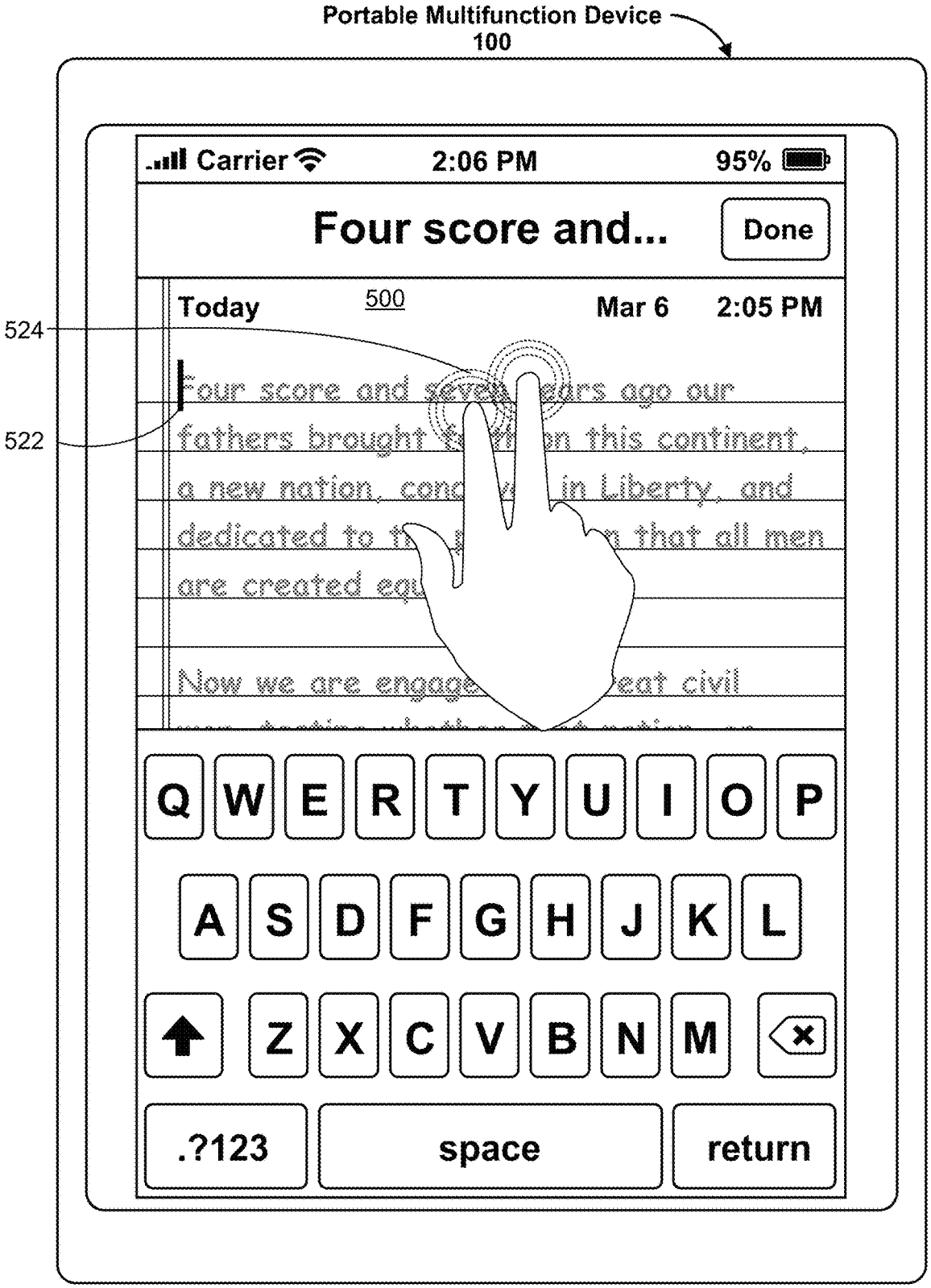
Carrier
2:06 PM
95%
Four score and...
Done
Today
500
Mar 6
2:05 PM
528
526
530
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5K


Portable Multifunction Device
100
Carrier
2:06 PM
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Four score and...
Done
Today
500
Mar 6
2:05 PM
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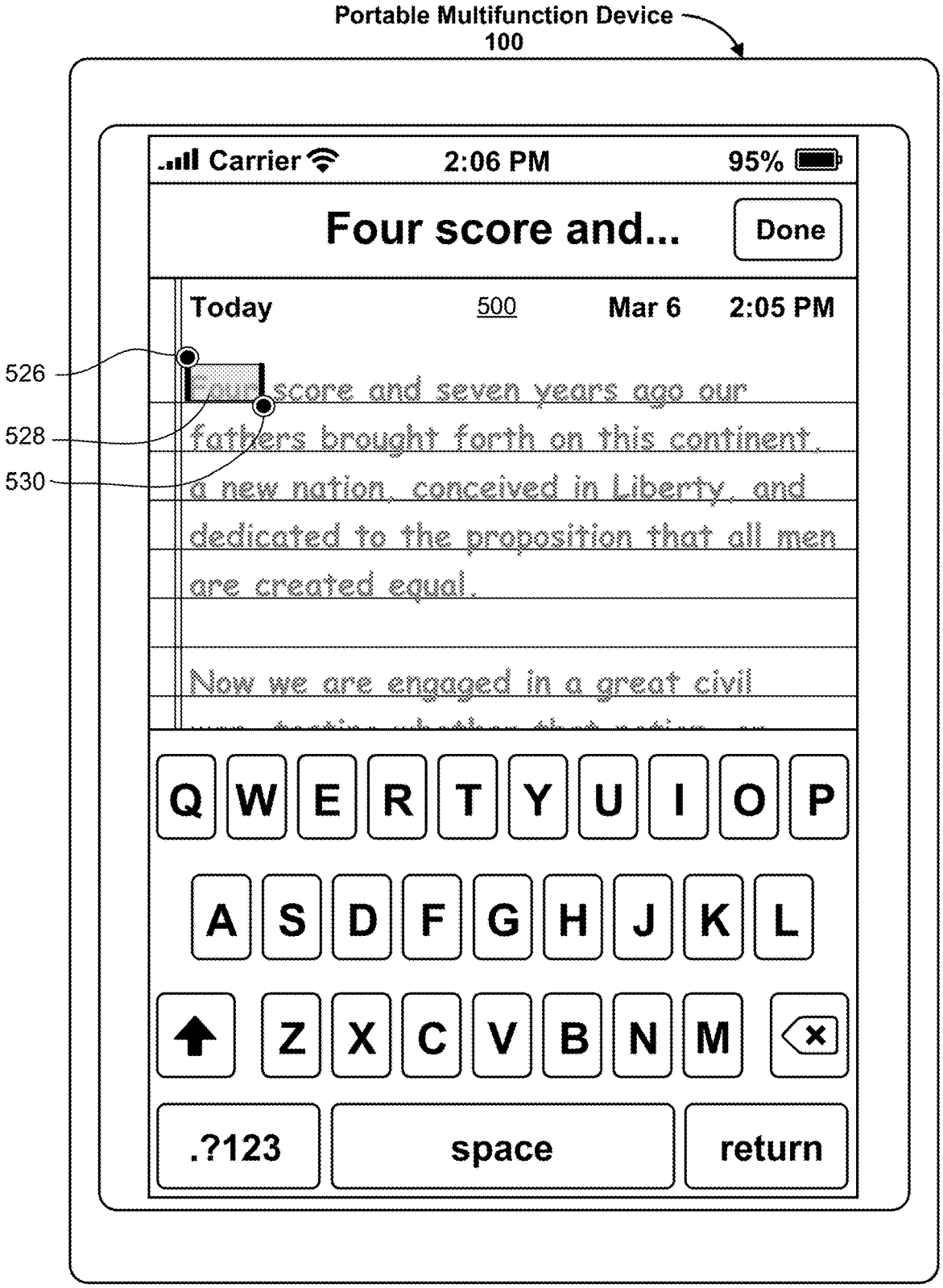
522
Four score and seven years ago our
fathers brought
on this continent,
a new nation, conc
in Liberty, and
dedicated to t
that all men
are created eq
Now we are engage
eat civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5L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100
Carrier
2:06 PM
95%
Four score and...
Done
Today
500
Mar 6
2:05 PM
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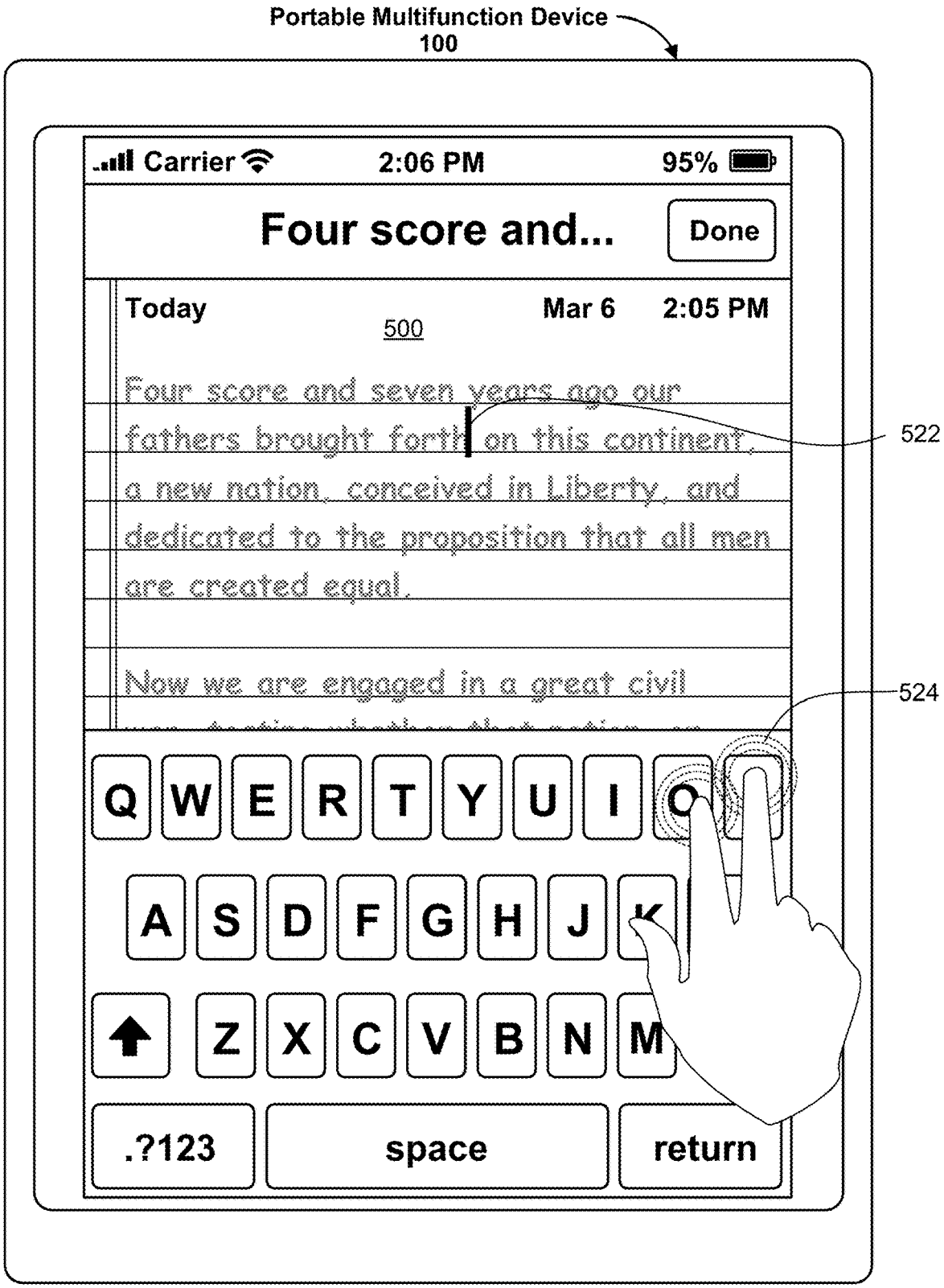
528
530
score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5M


Portable Multifunction Device
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Carrier
2:06 PM
95%
Four score and...
Done
Today
Mar 6
2:05 PM
500
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
522
524
Q W E R T Y U I O
A S D F G H J K
Z X C V B N M
.?123
space
return

Figure 5N

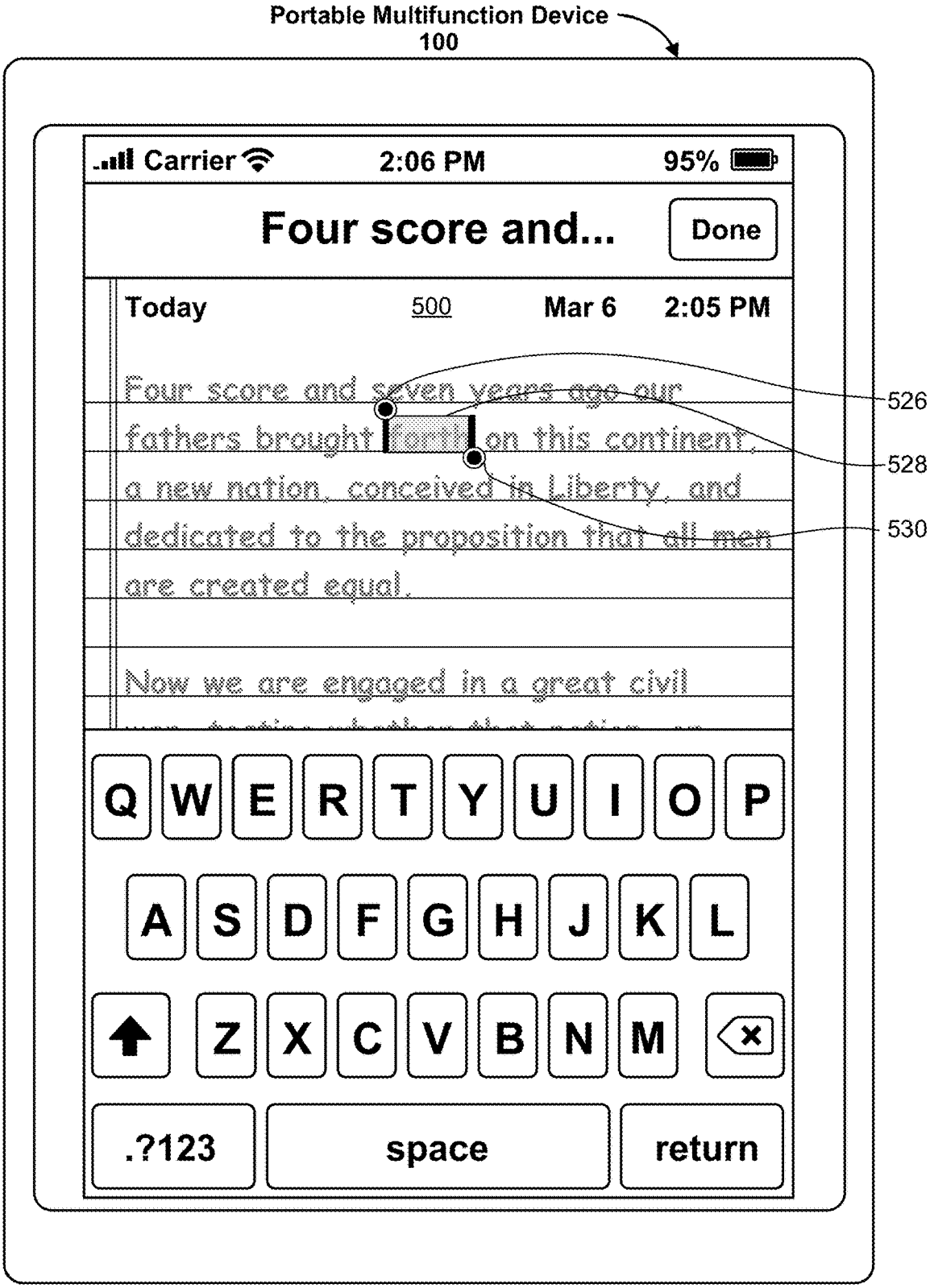

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
500
Mar 6
2:05 PM
Four score and seven years ago our
fathers brought
on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
526
528
530
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5O

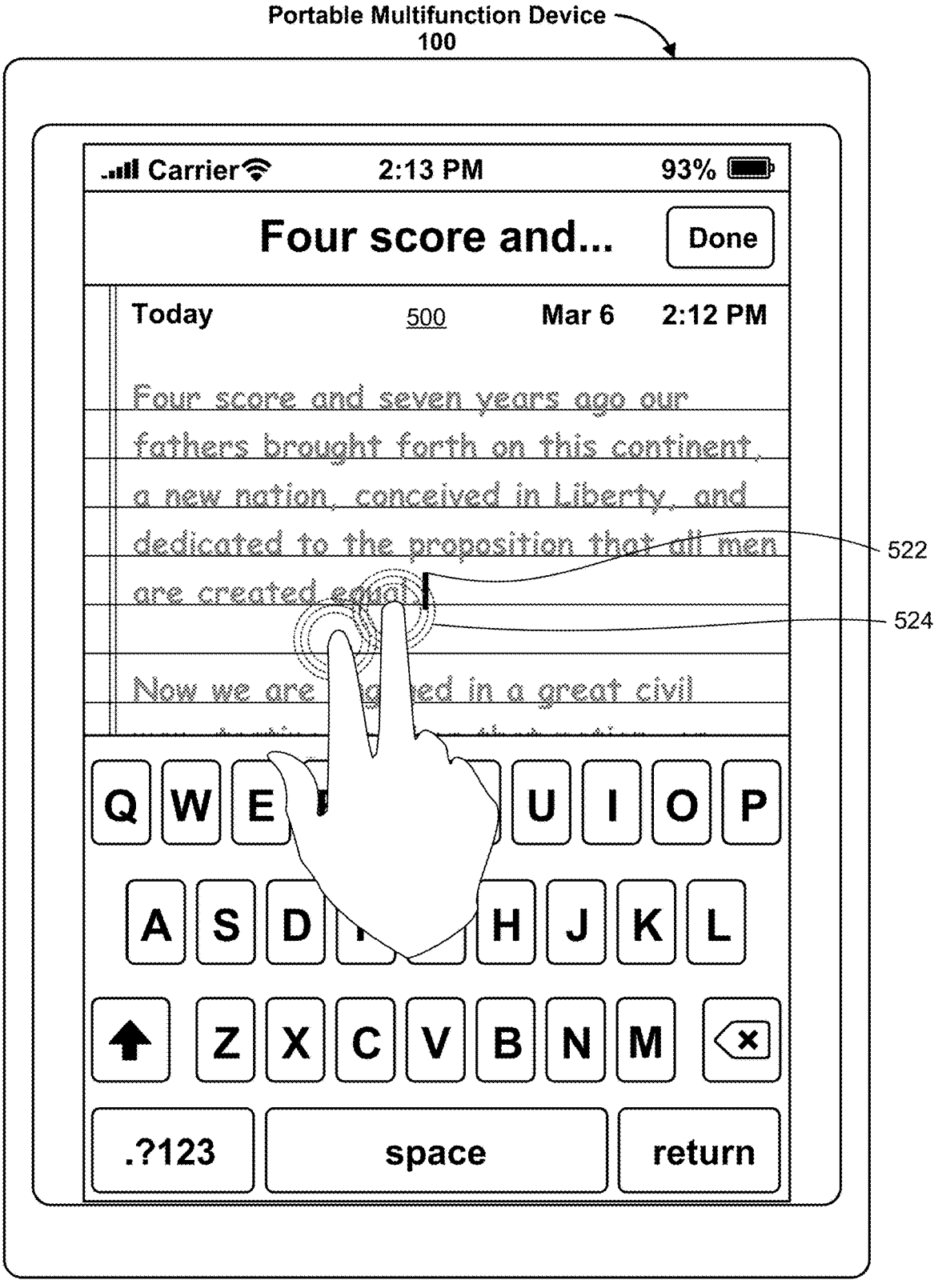
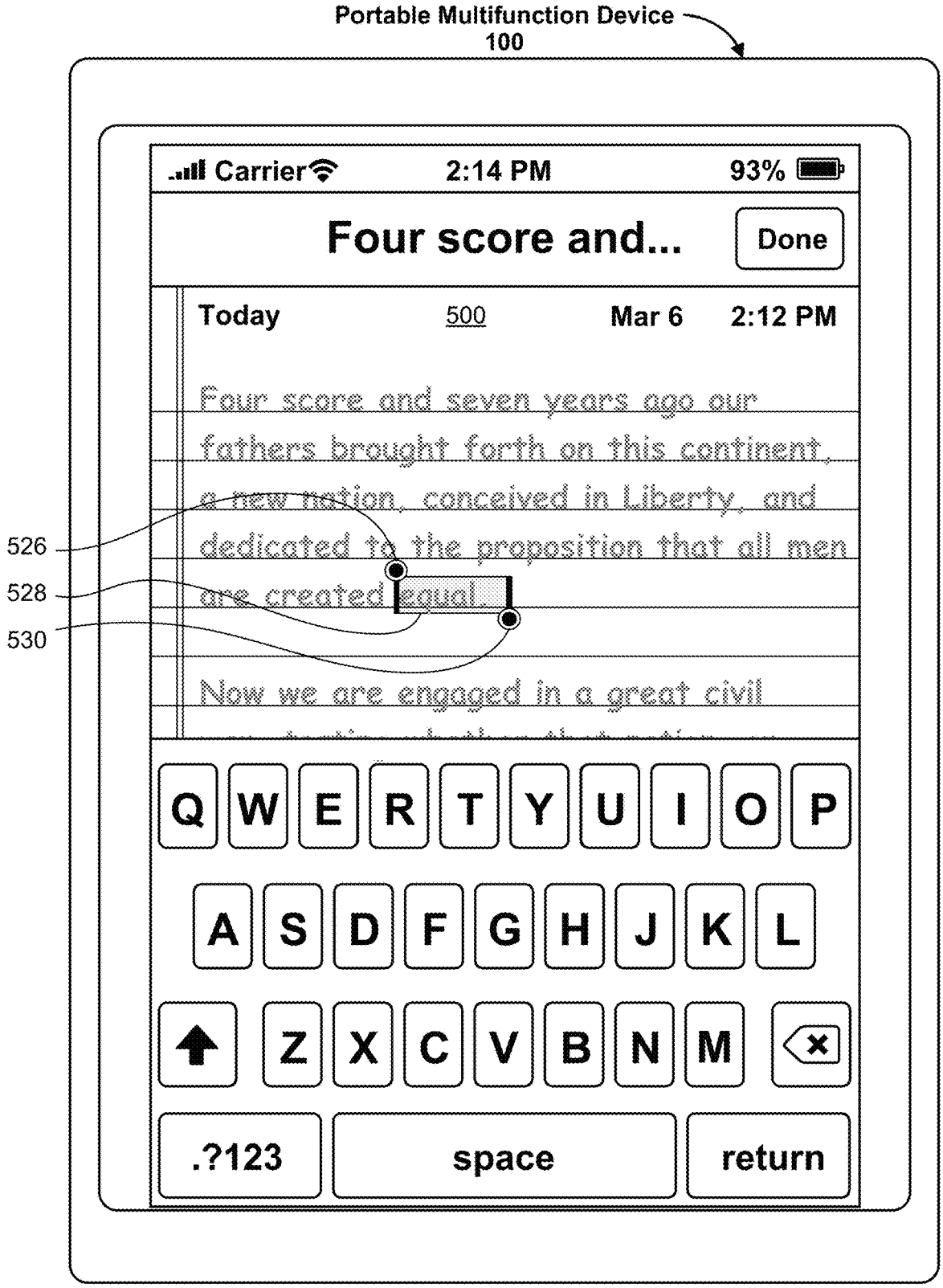

Portable Multifunction Device
100
Carrier
2:13 PM
93%
Four score and...
Done
Today
500
Mar 6
2:12 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are
ed in a great civil
522
524
Q W E U I O P
A S D H J K L
Z X C V B N M
.?123
space
return

Figure 5P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Carrier
2:14 PM
93%
Four score and...
Done
Today
500
Mar 6
2:12 PM
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
526
528
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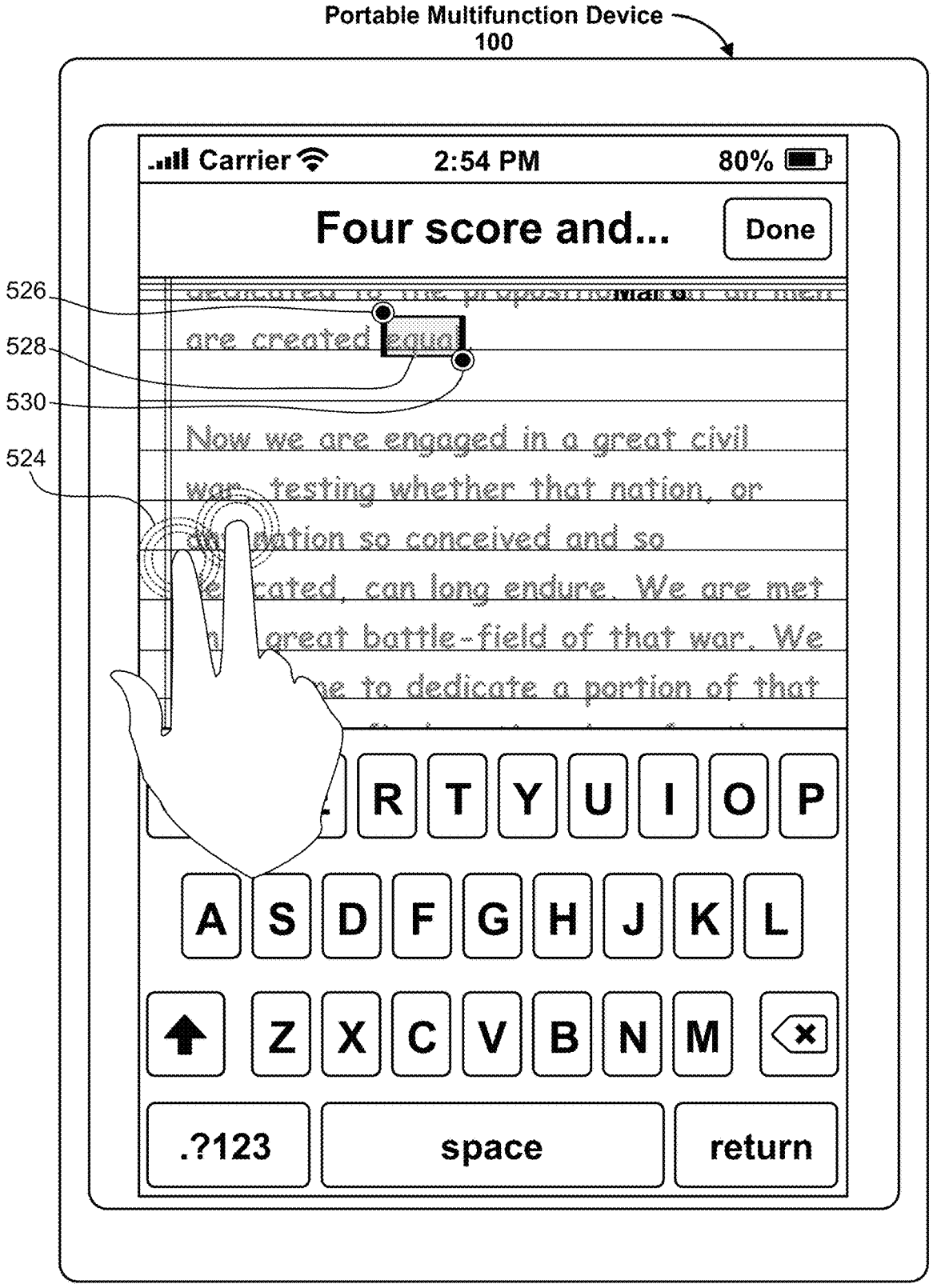
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5Q


Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
526
528
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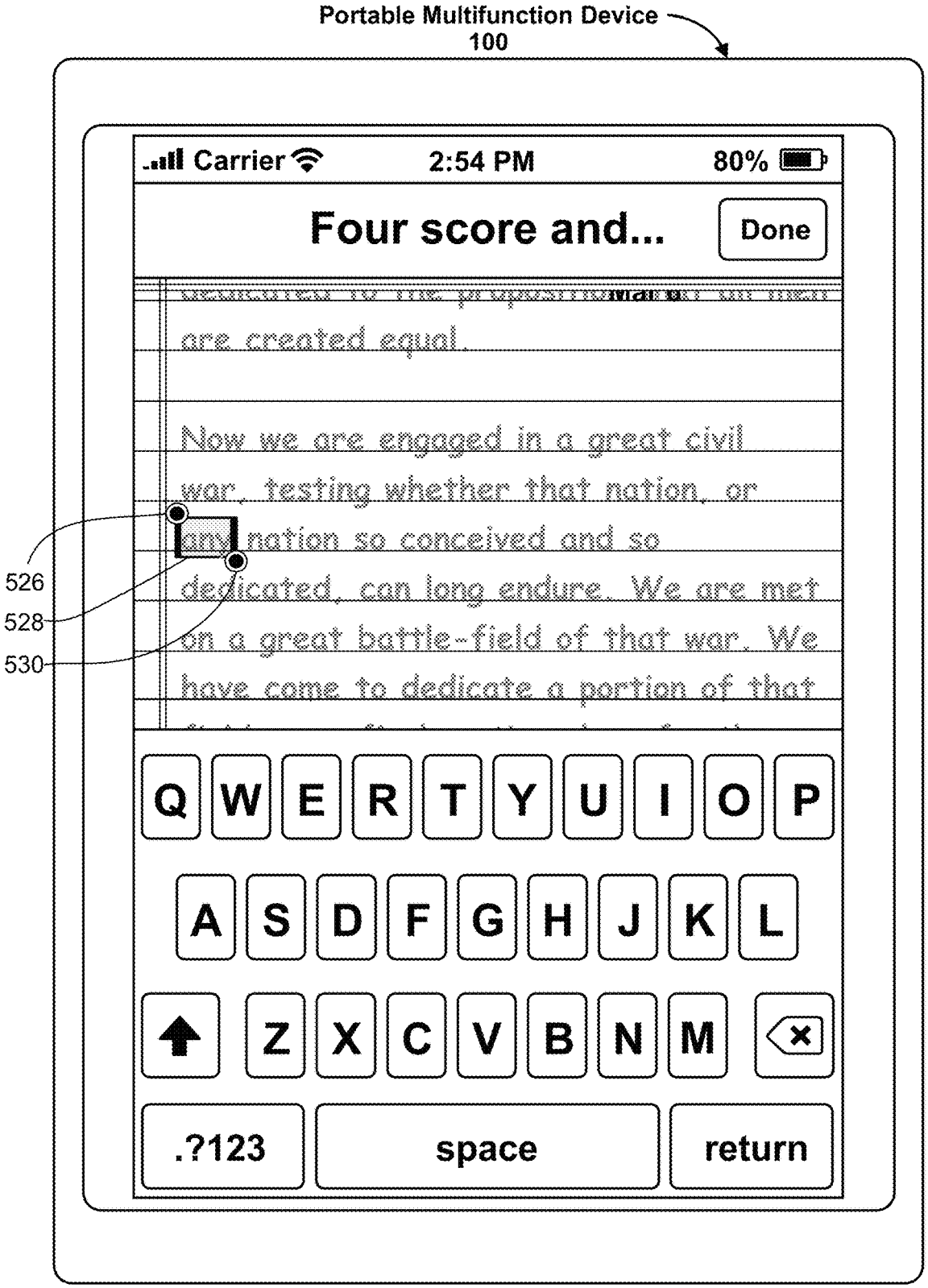
524
are created equal.
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We are met
on a great battle-field of that war. We
come to dedicate a portion of that
R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5R


Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
are created equal.
Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that
526
528
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Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5S

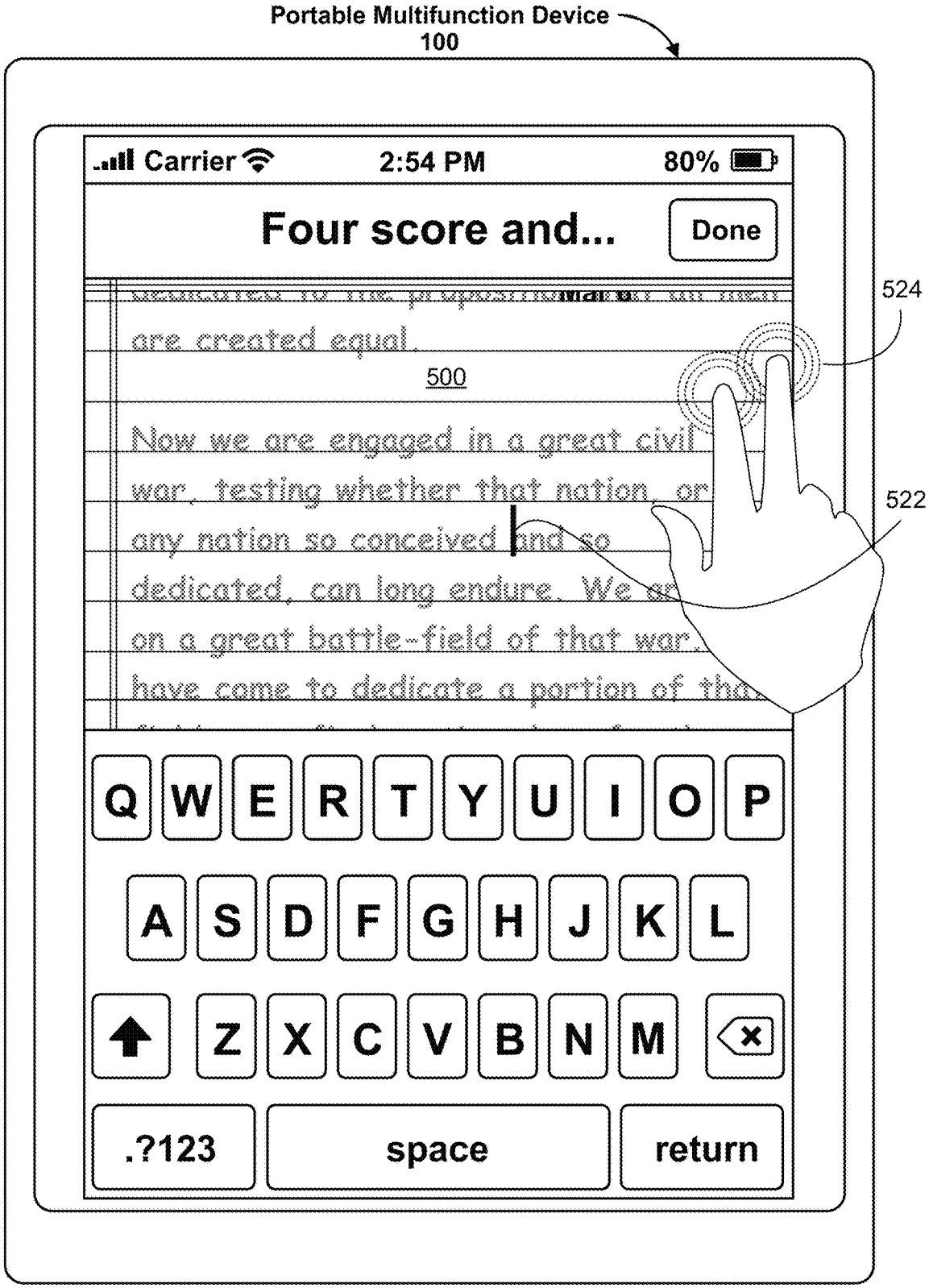

Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
524
are created equal.
500
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We
on a great battle-field of that war.
have come to dedicate a portion of
522
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5T

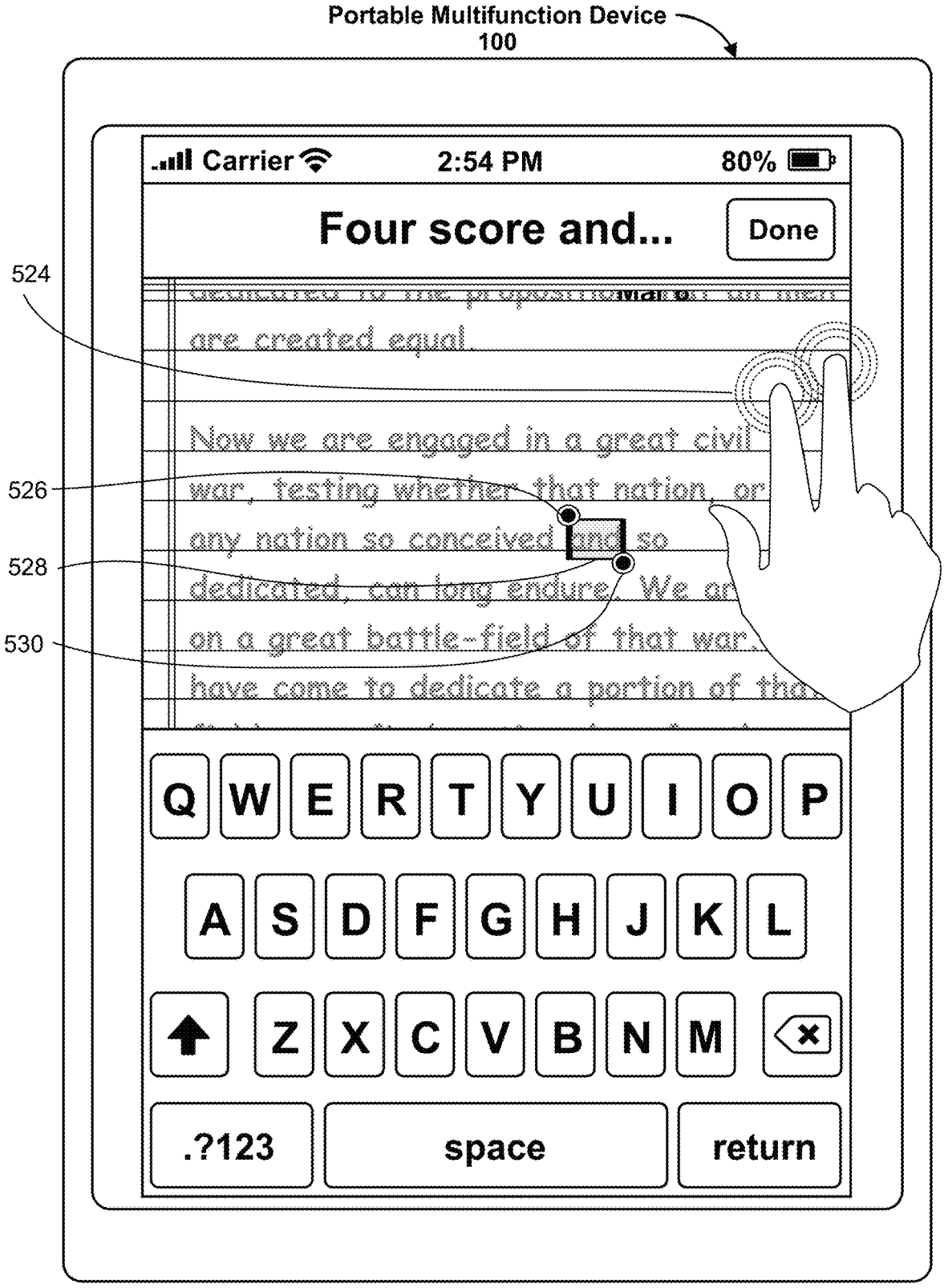
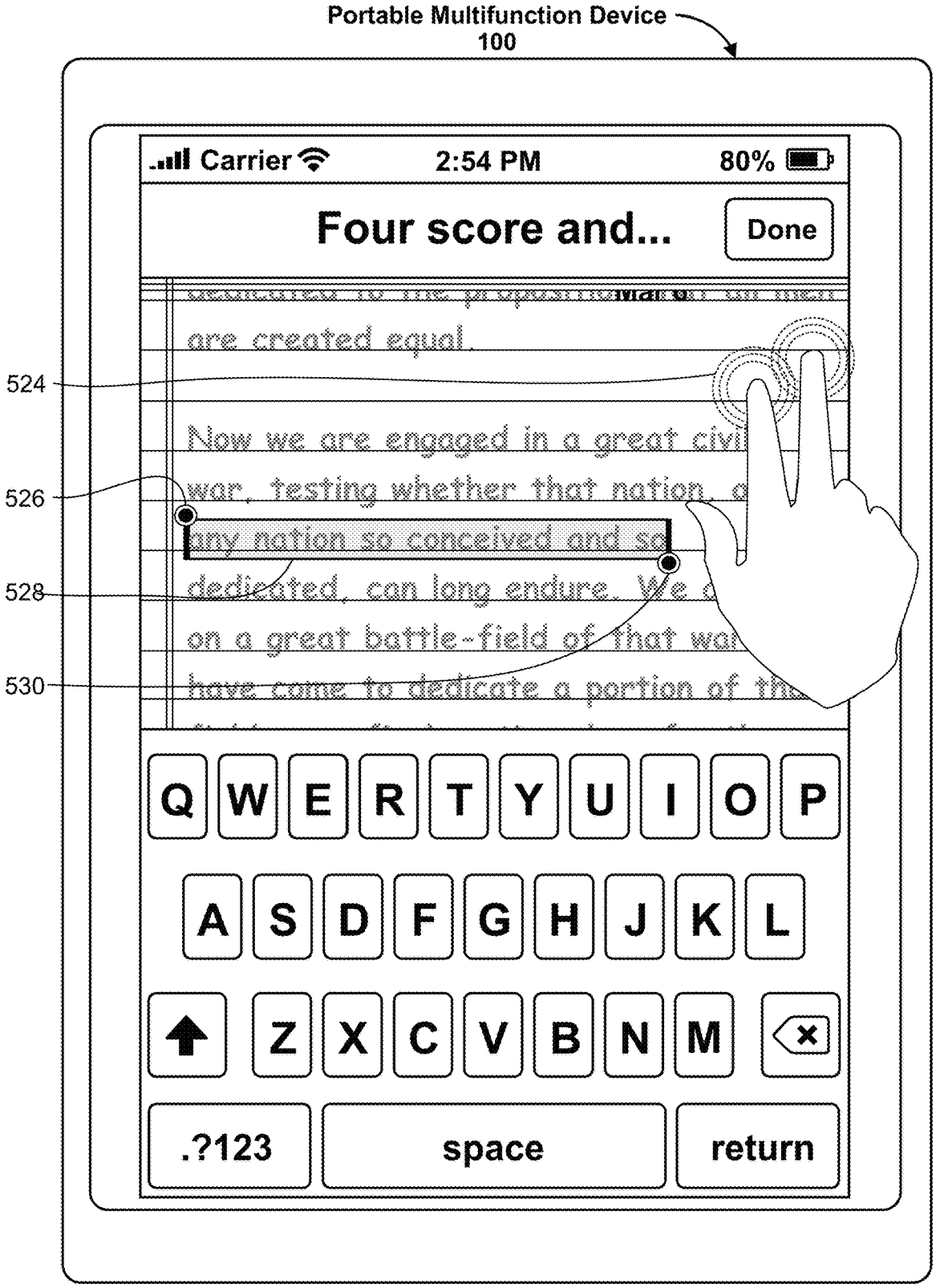

Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
524
are created equal.
Now we are engaged in a great civil
war, testing whether that nation, or
526
any nation so conceived and so
528
dedicated, can long endure. We ar
on a great battle-field of that war.
530
have come to dedicate a portion of tha
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5U


Portable Multifunction Device
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Carrier
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Four score and...
Done
are created equal.
Now we are engaged in a great civi
war, testing whether that nation, o
any nation so conceived and so
dedicated, can long endure. We
on a great battle-field of that wa
have come to dedicate a portion of th
524
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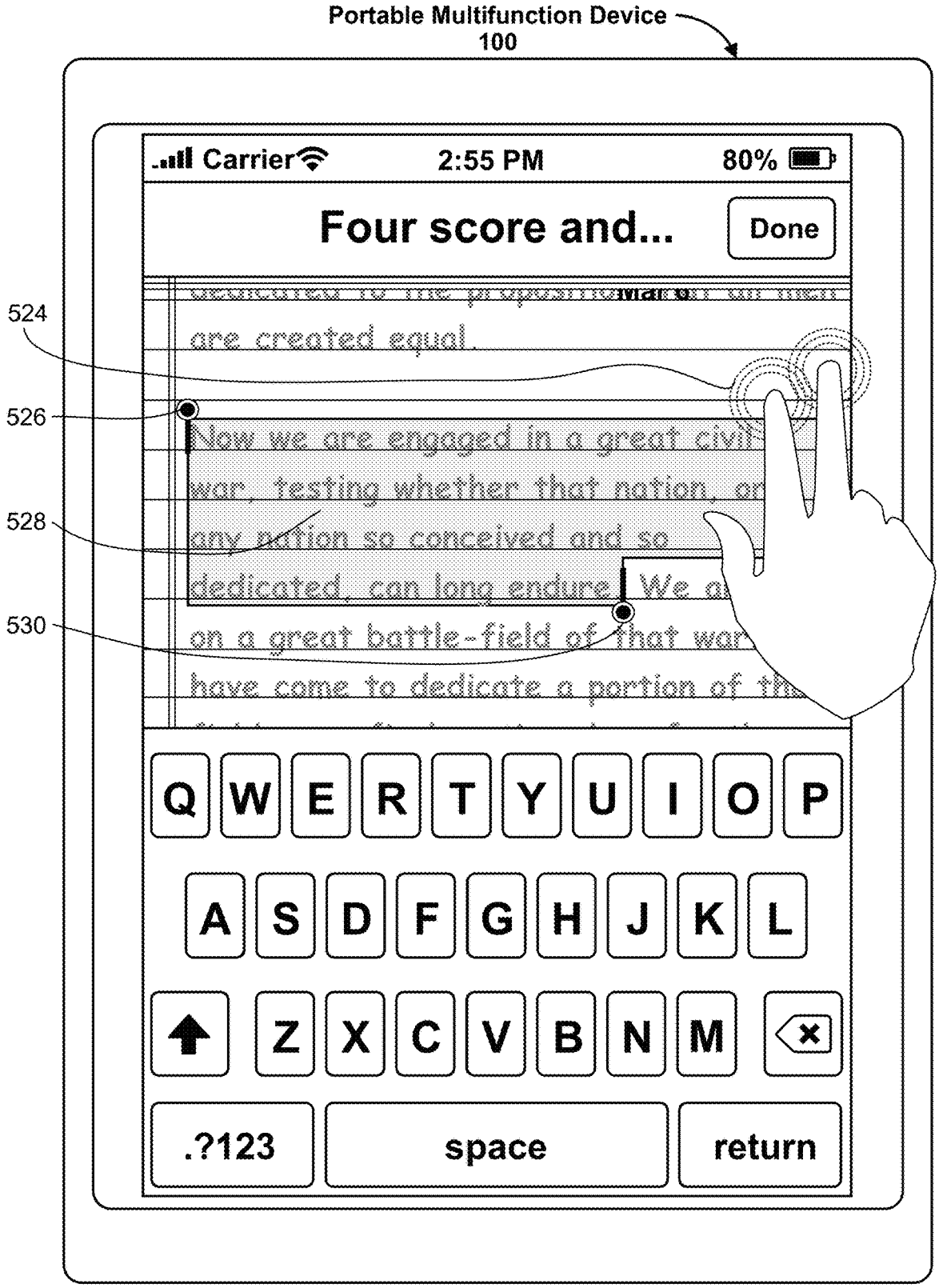
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5V


Portable Multifunction Device
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Carrier
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80%
Four score and...
Done
524
526
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are created equal.
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We a
on a great battle-field of that war
have come to dedicate a portion of th
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5W

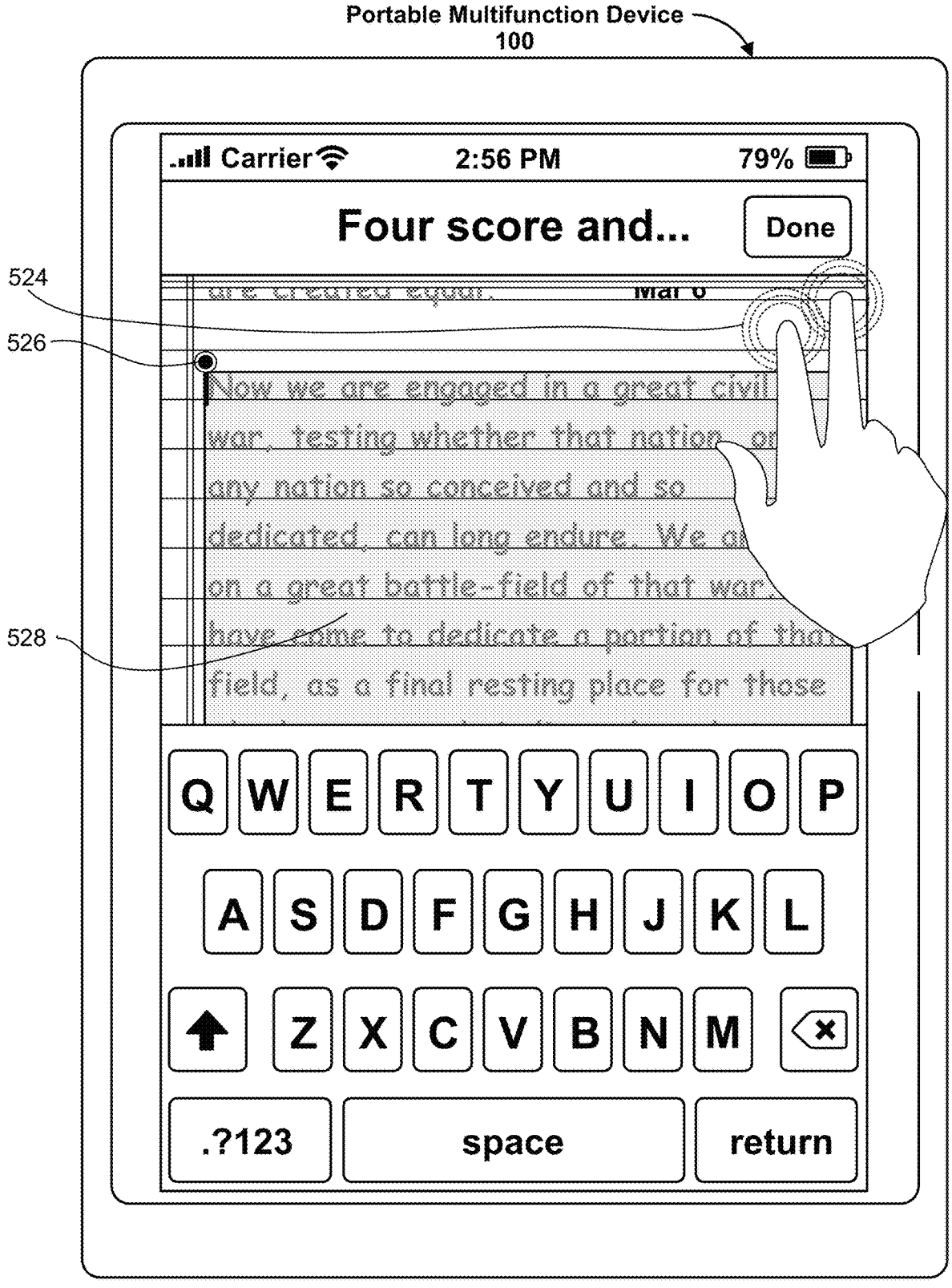

Portable Multifunction Device
100
Carrier
2:56 PM
79%
Four score and...
Done
524
526
528
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We a
on a great battle-field of that war.
have come to dedicate a portion of that
field, as a final resting place for those
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5X

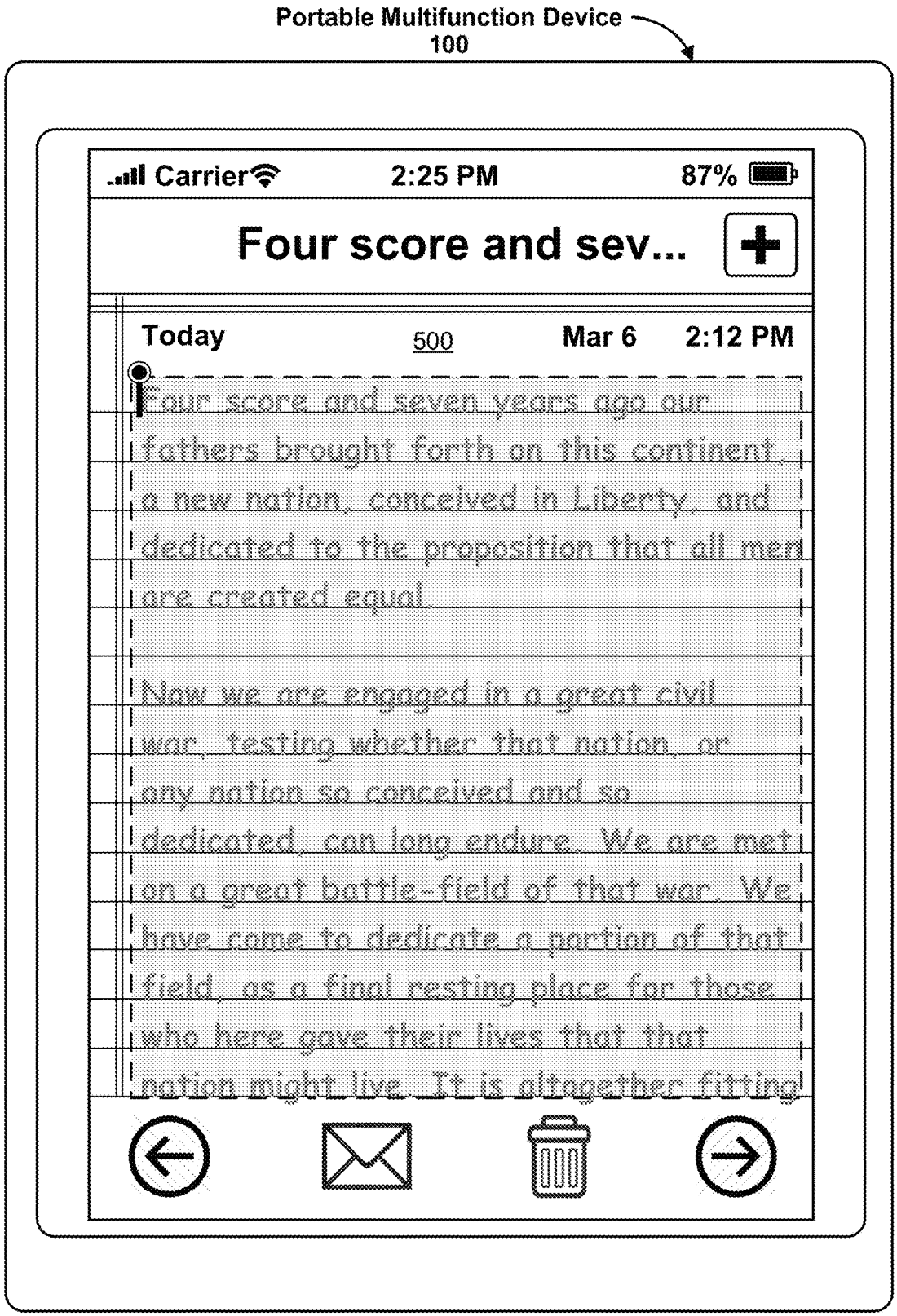

Portable Multifunction Device
100
Carrier
2:25 PM
87%
Four score and sev...
Today
500
Mar 6
2:12 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting

Figure 5Y

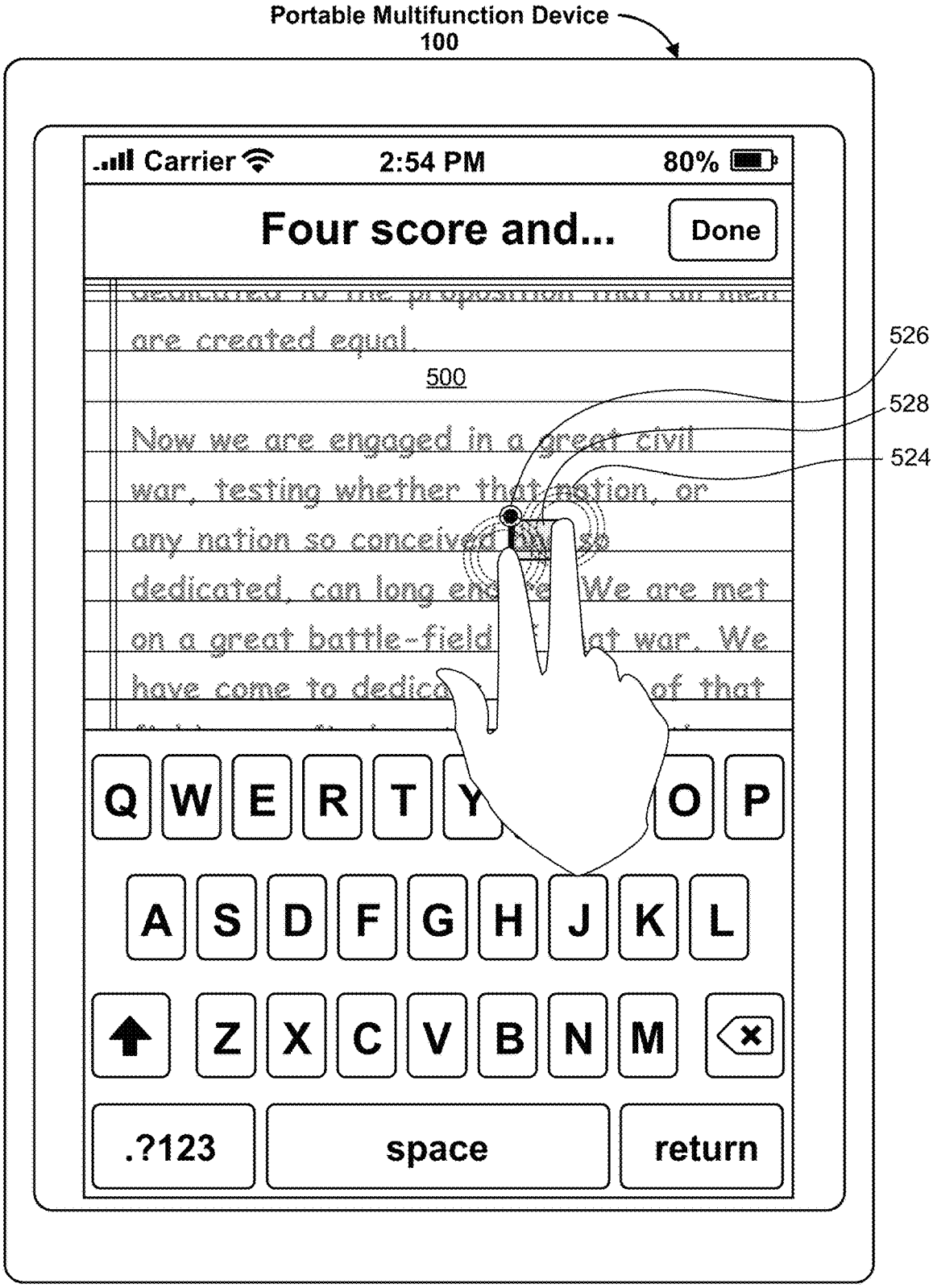

Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
are created equal.
500
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived
dedicated, can long
on a great battle-field
have come to dedica
Q W E R T Y O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
526
528
524

Figure 5Z

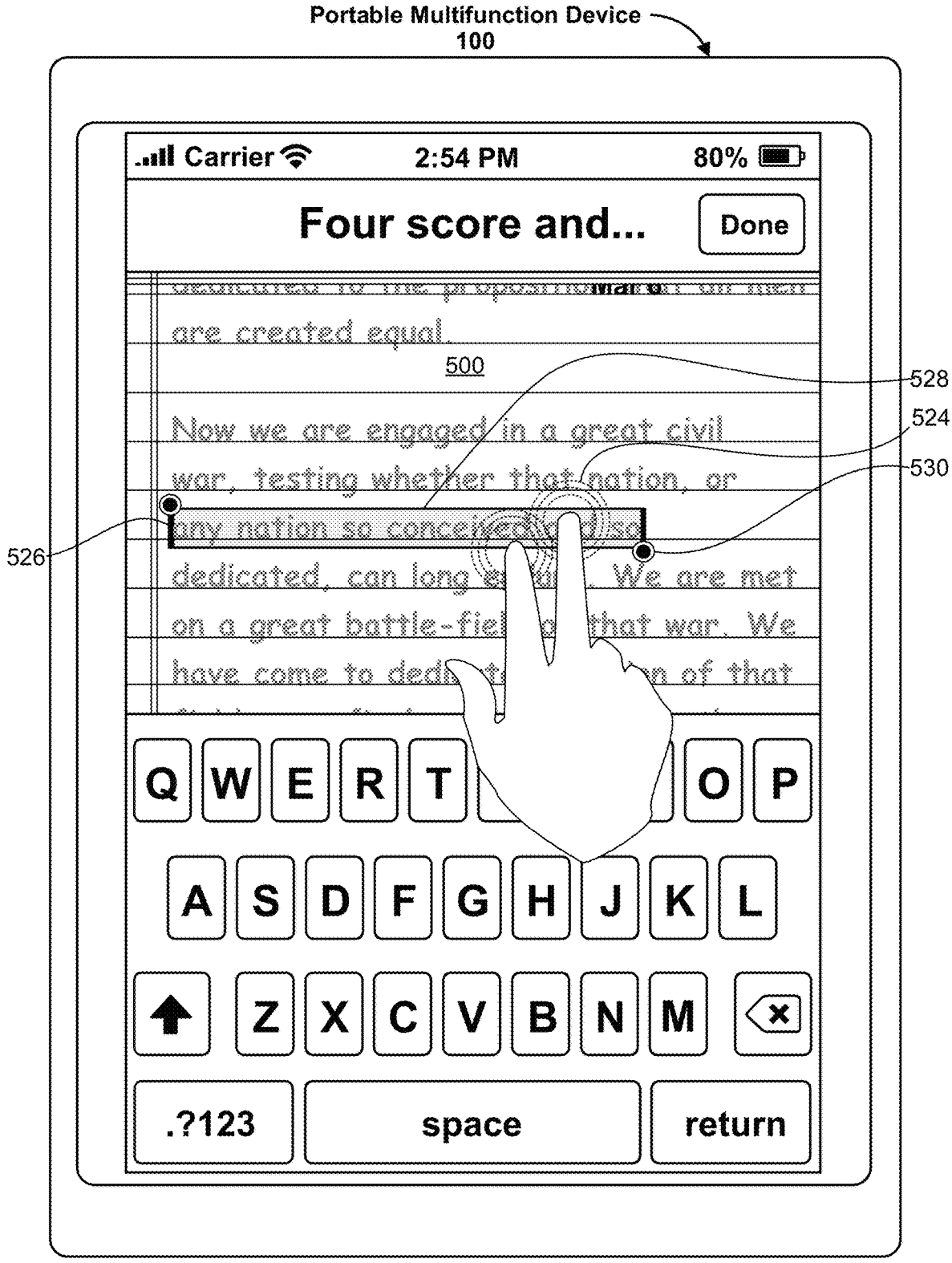

Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
are created equal
500
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We are met
on a great battle-field of that war. We
have come to dedicate a portion of that
Q W E R T O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
526
528
524
530

Figure 5AA

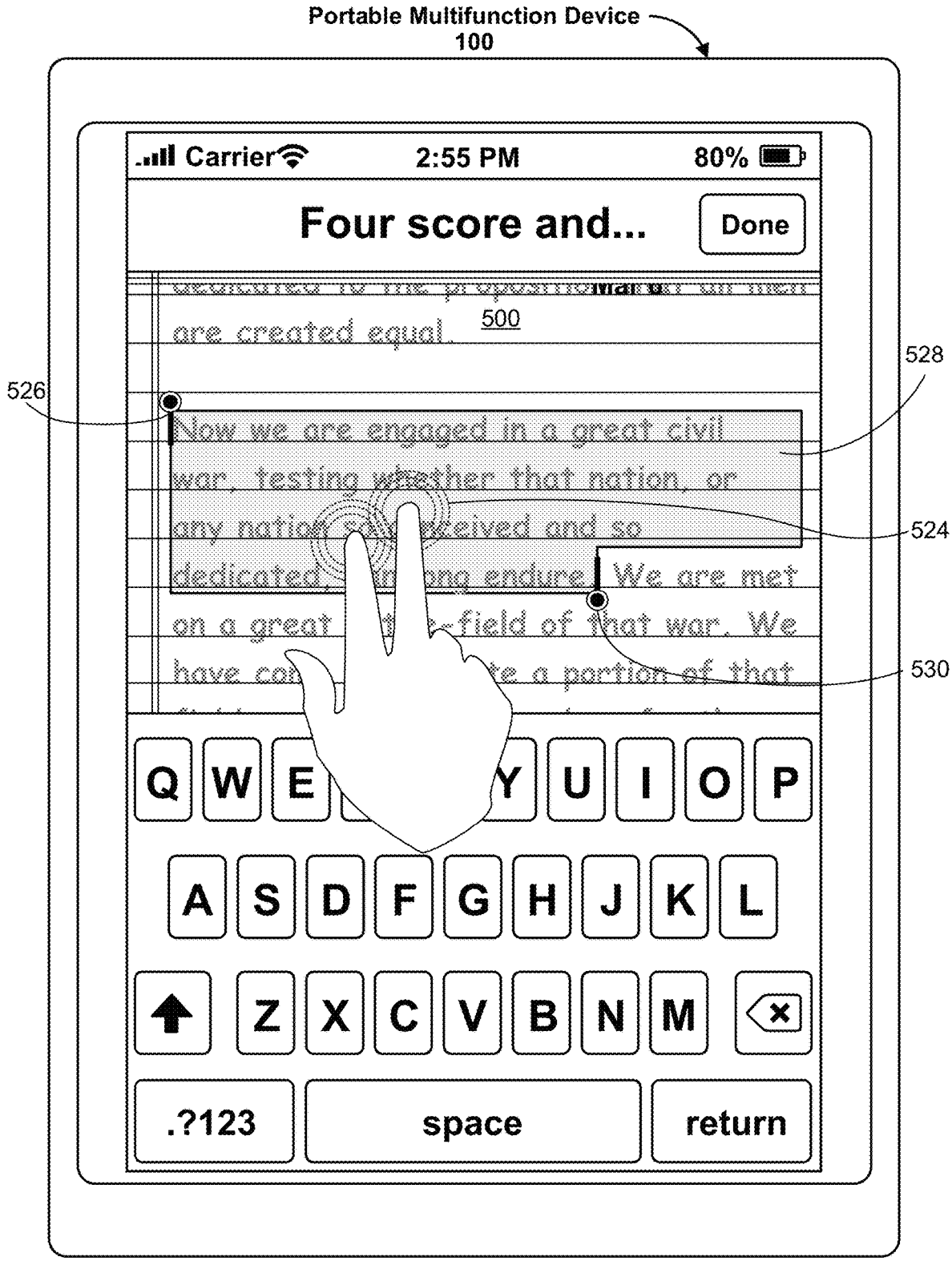

Portable Multifunction Device
100
Carrier
2:55 PM
80%
Four score and...
Done
500
are created equal.
526
528
Now we are engaged in a great civil
war, testing whether that nation, or
any nation
524
dedicated,
We are met
on a great
field of that war. We
530
Q W E Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AB

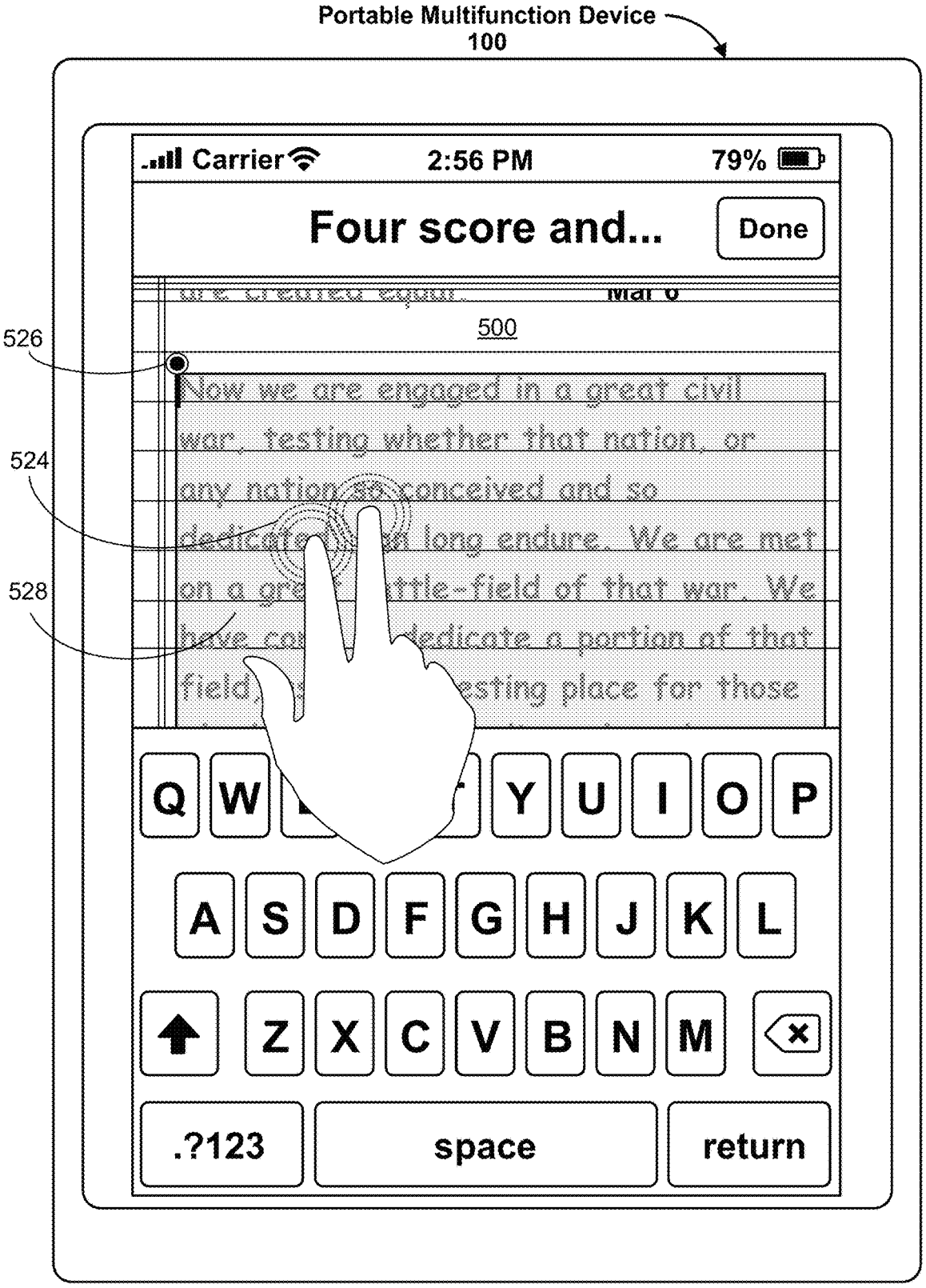
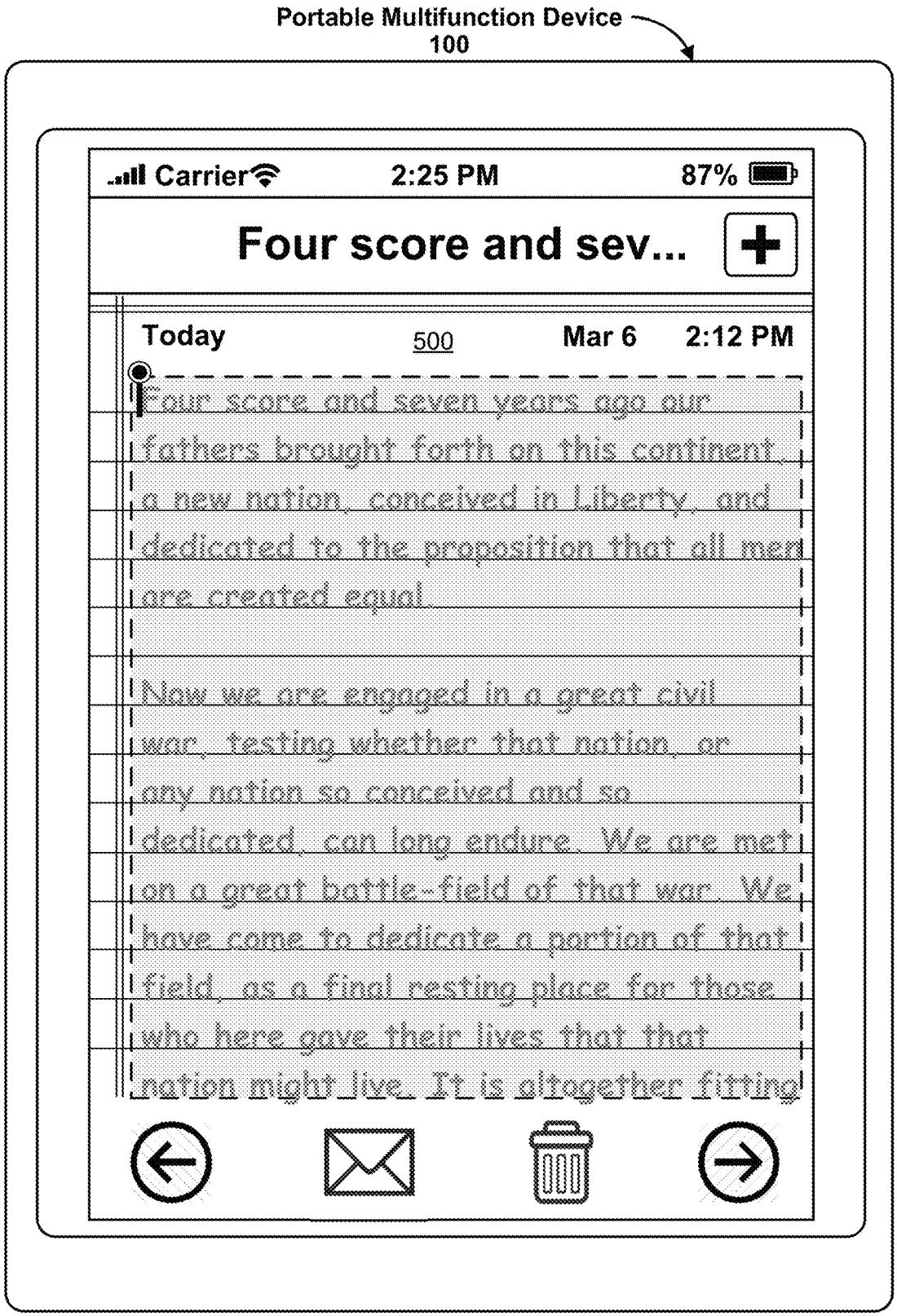

Portable Multifunction Device
100
Carrier
2:56 PM
79%
Four score and...
Done
500
526
524
528
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
long endure. We are met
on a great battle-field of that war. We
have come to dedicate a portion of that
field, as a resting place for those
Q W Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AC


Portable Multifunction Device
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Carrier
2:25 PM
87%
Four score and sev...
Today
500
Mar 6
2:12 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting

Figure 5AD

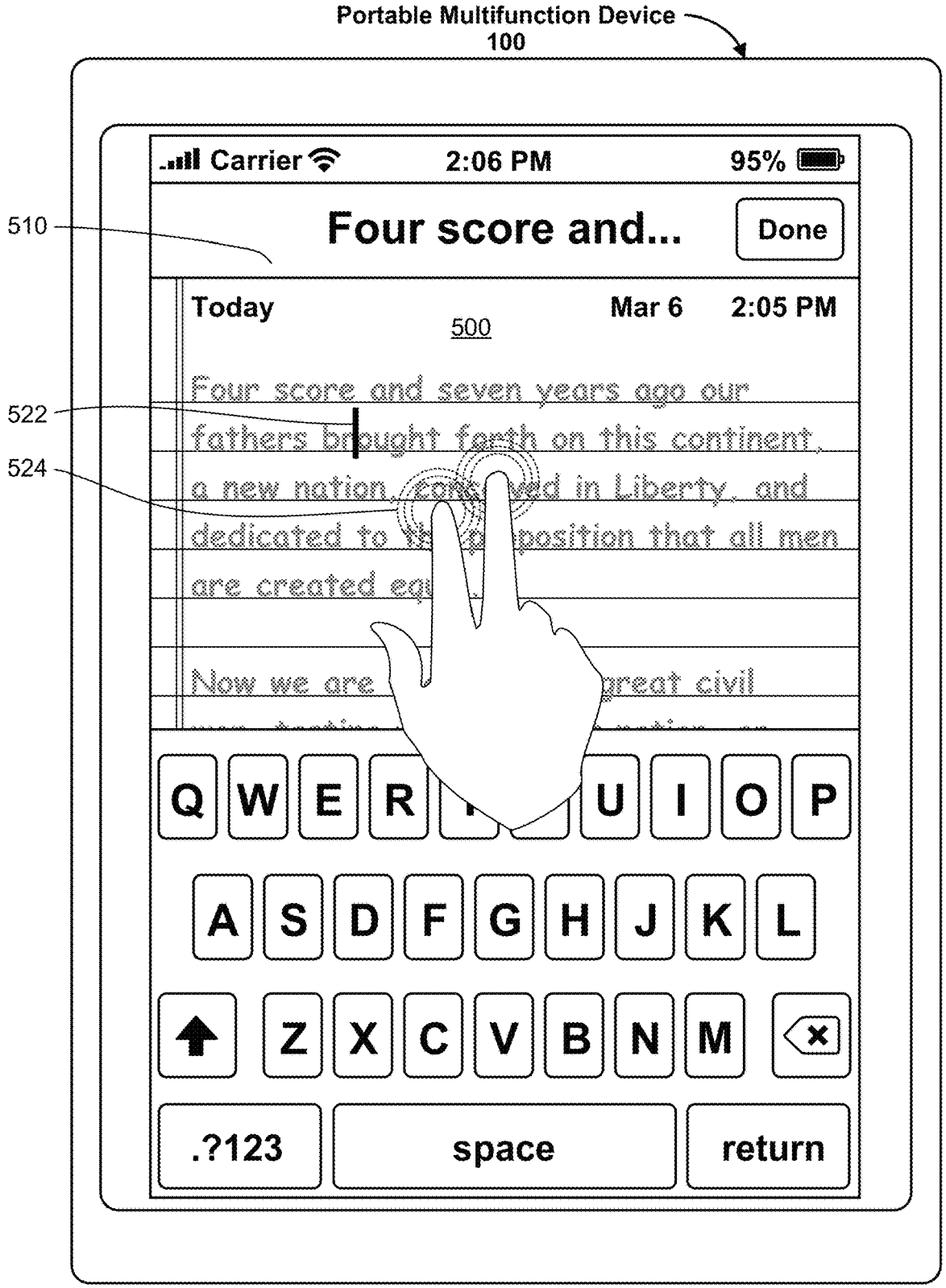

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
510
Today
Mar 6
2:05 PM
500
522
524
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AE

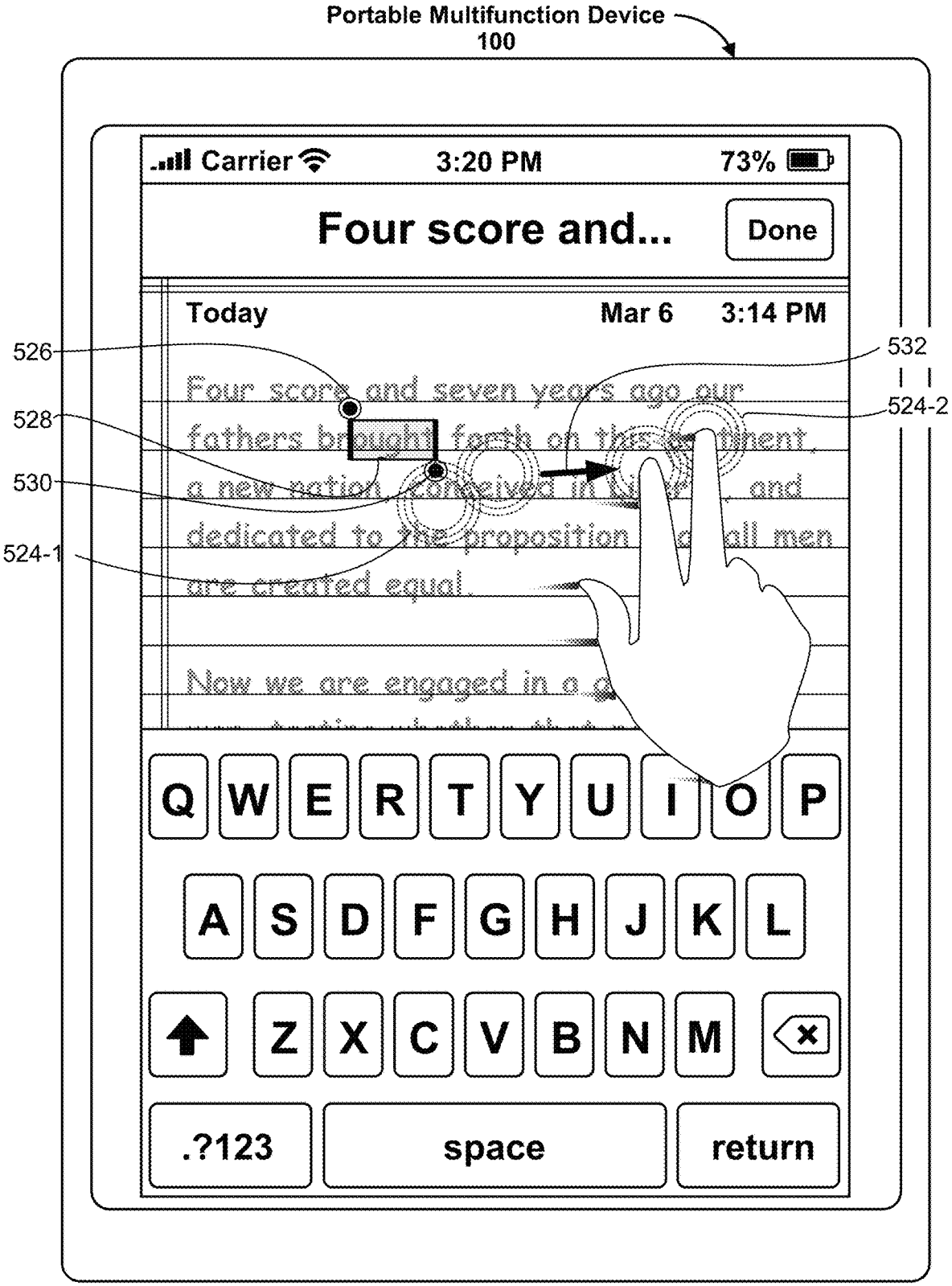

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
526
528
530
524-1
532
524-2
Four score and seven years ago our
fathers brought forth on this
a new nation, conceived in
and
dedicated to the proposition
all men
are created equal.
Now we are engaged in a
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AF

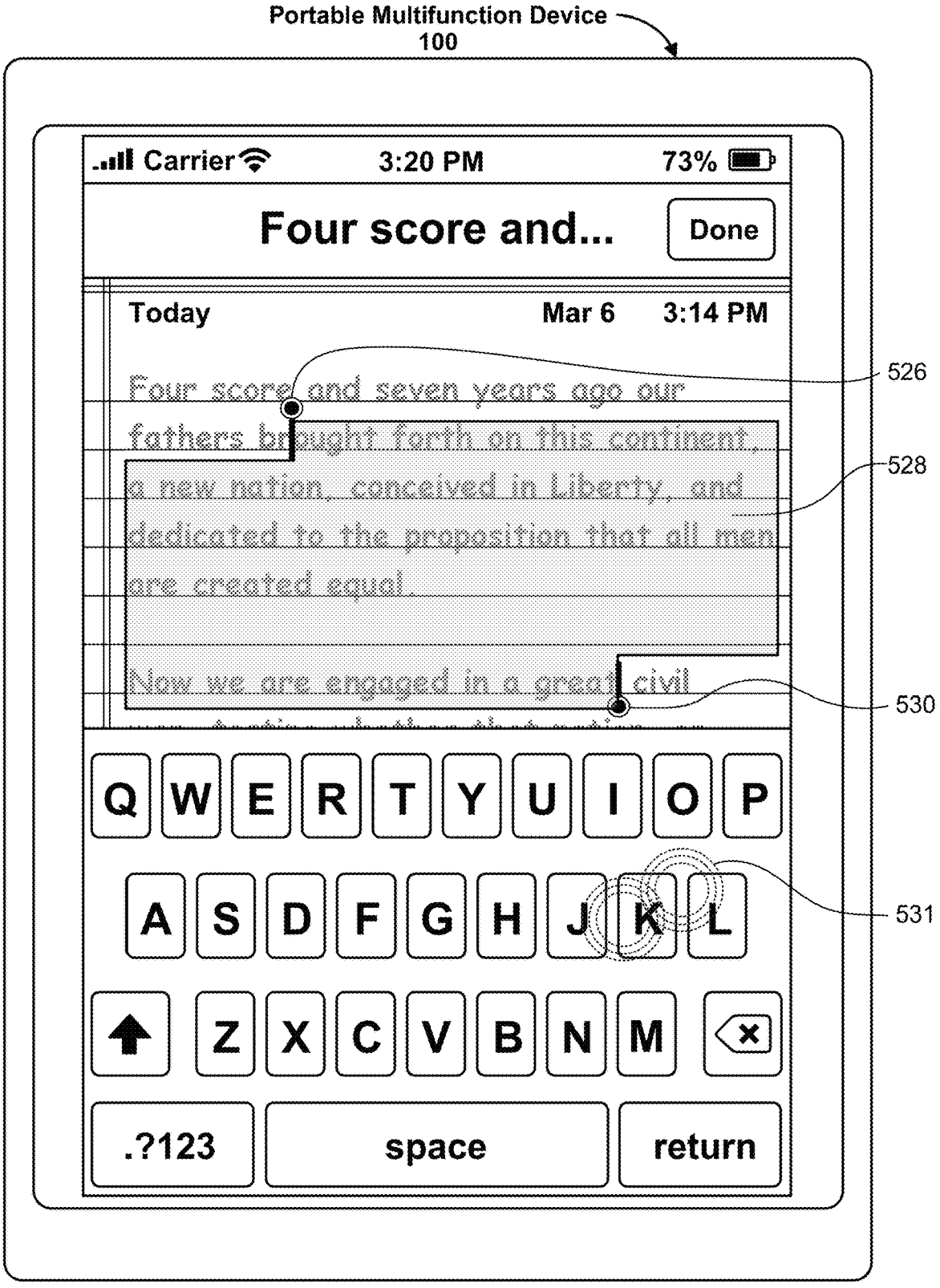

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
526
528
530
531
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AG

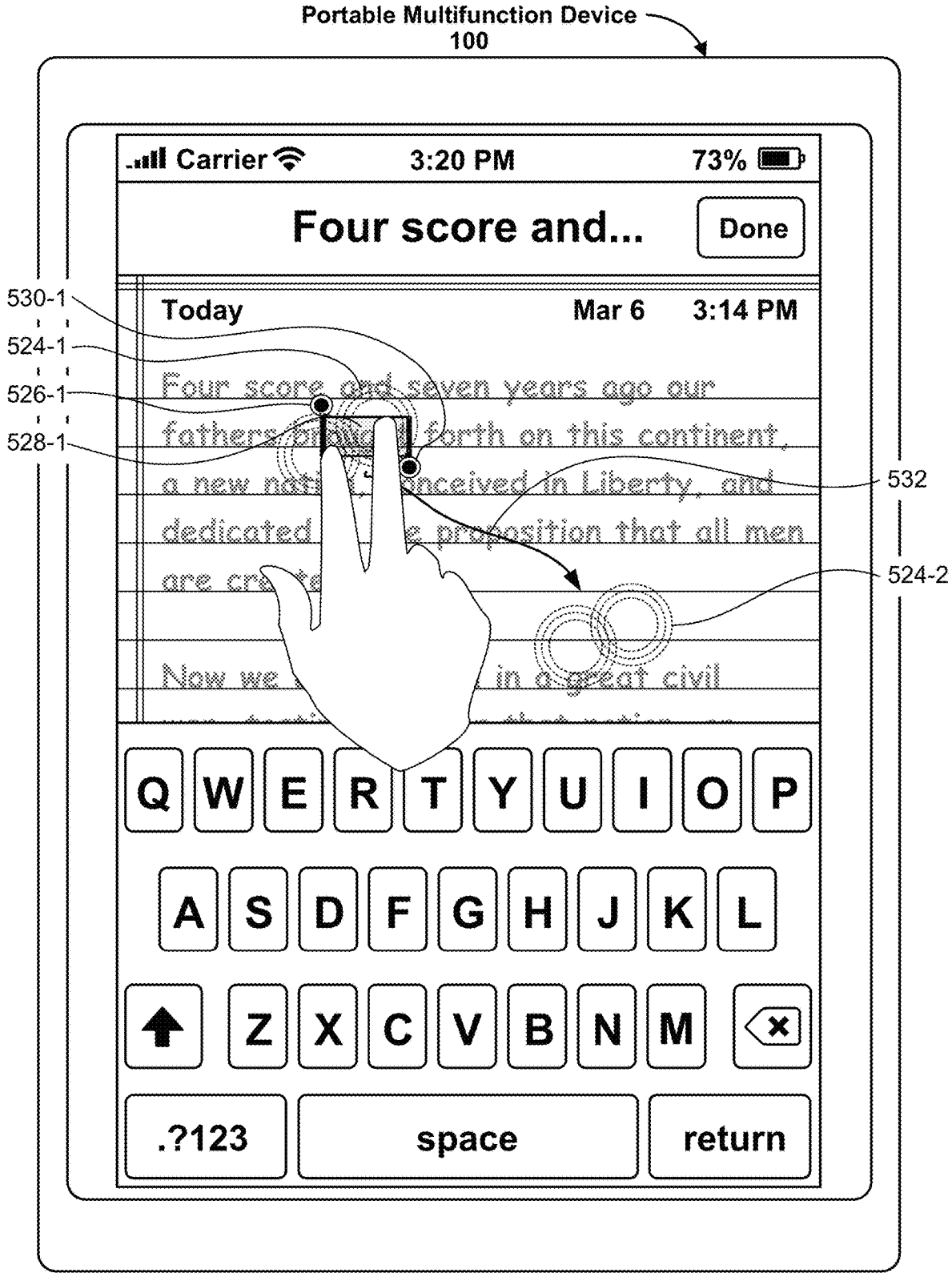

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our
fathers
forth on this continent,
a new nat
nceived in Liberty, and
dedicated
e proposition that all men
are cre
Now we
in a great civil
530-1
524-1
526-1
528-1
532
524-2
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AH

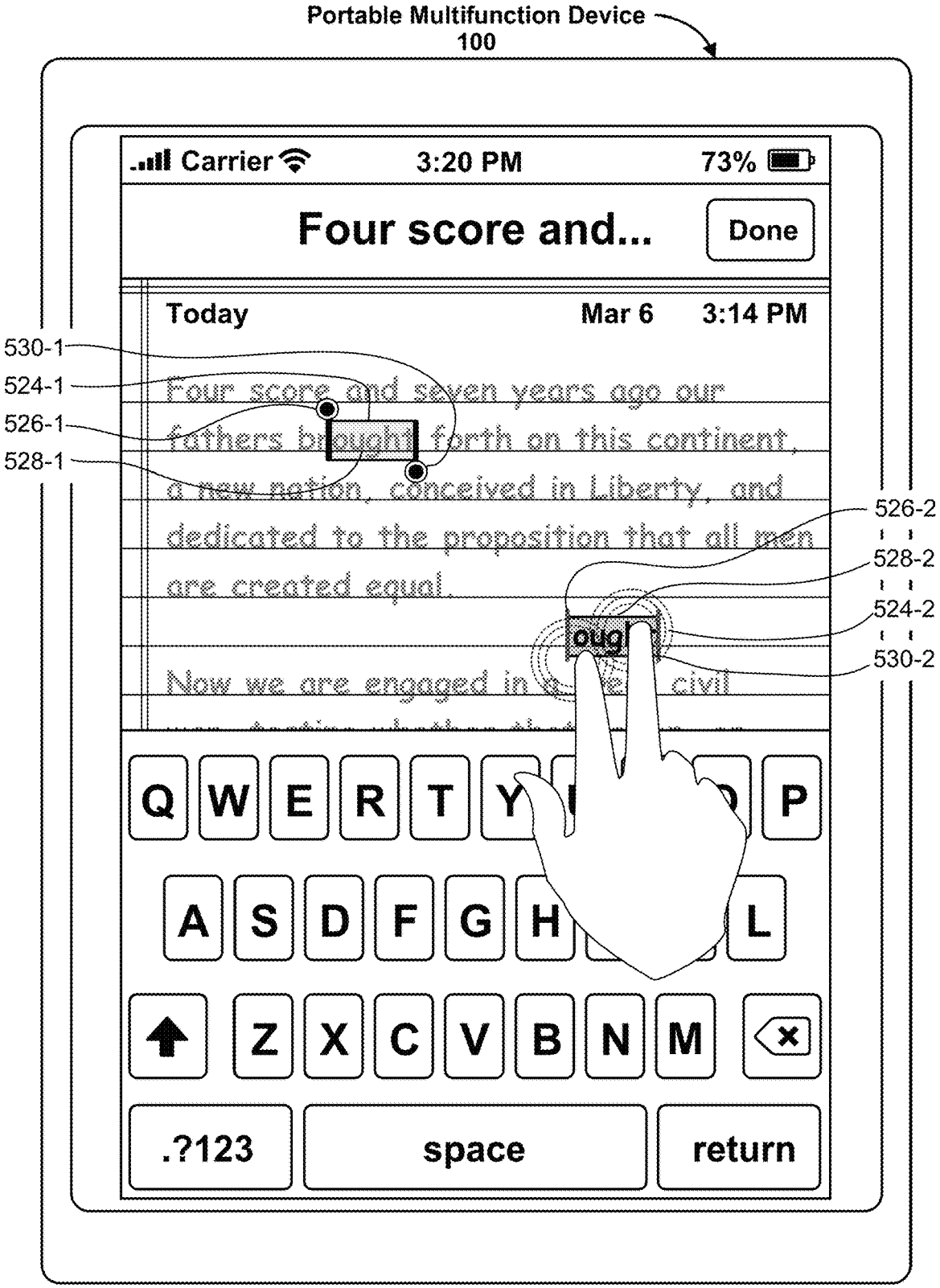

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
530-1
524-1
526-1
528-1
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in
civil
526-2
528-2
524-2
530-2
oug
Q W E R T Y P
A S D F G H L
Z X C V B N M
.?123
space
return

Figure 5AI

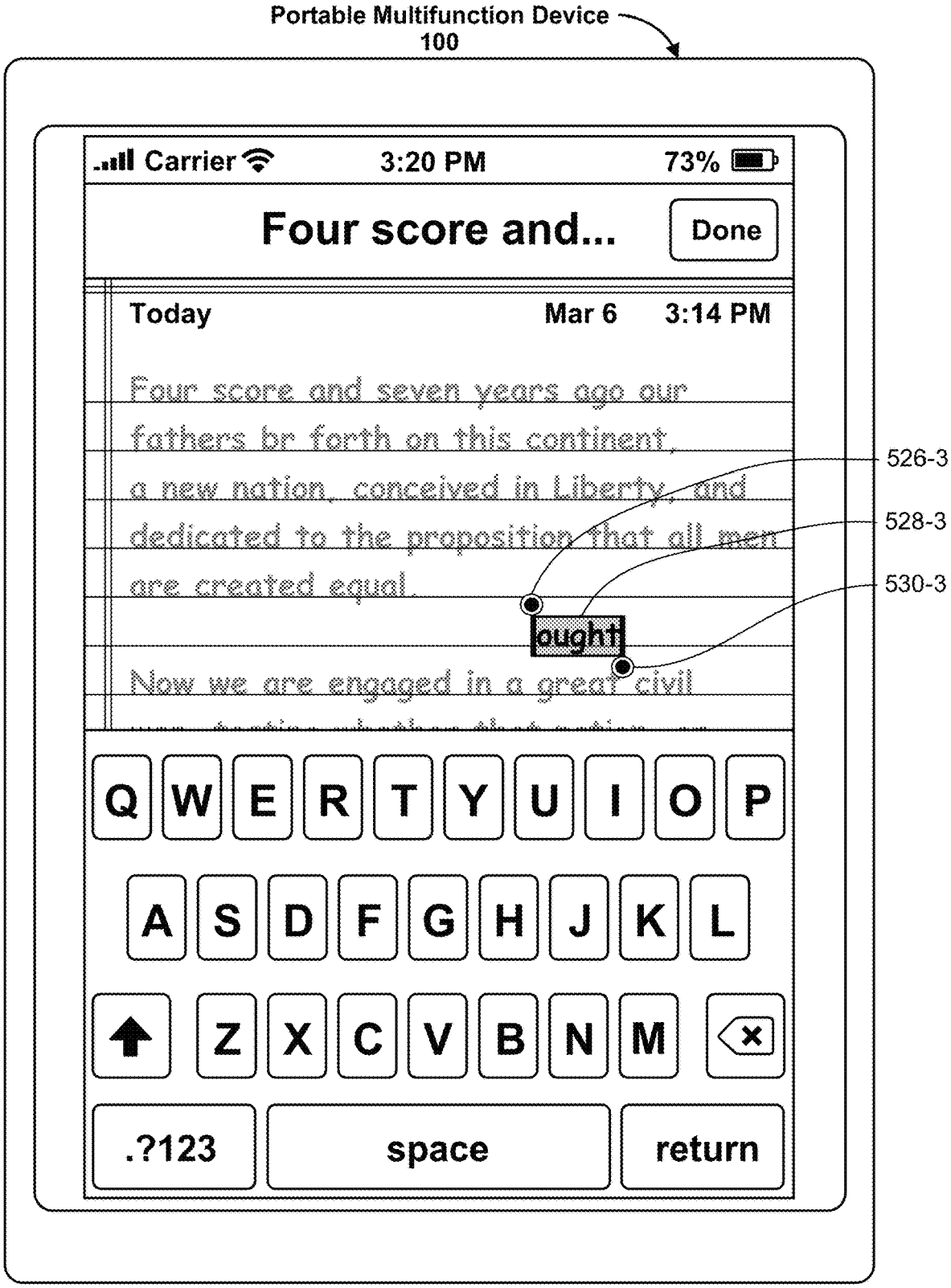

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our
fathers br forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
ought
Now we are engaged in a great civil
526-3
528-3
530-3
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AJ

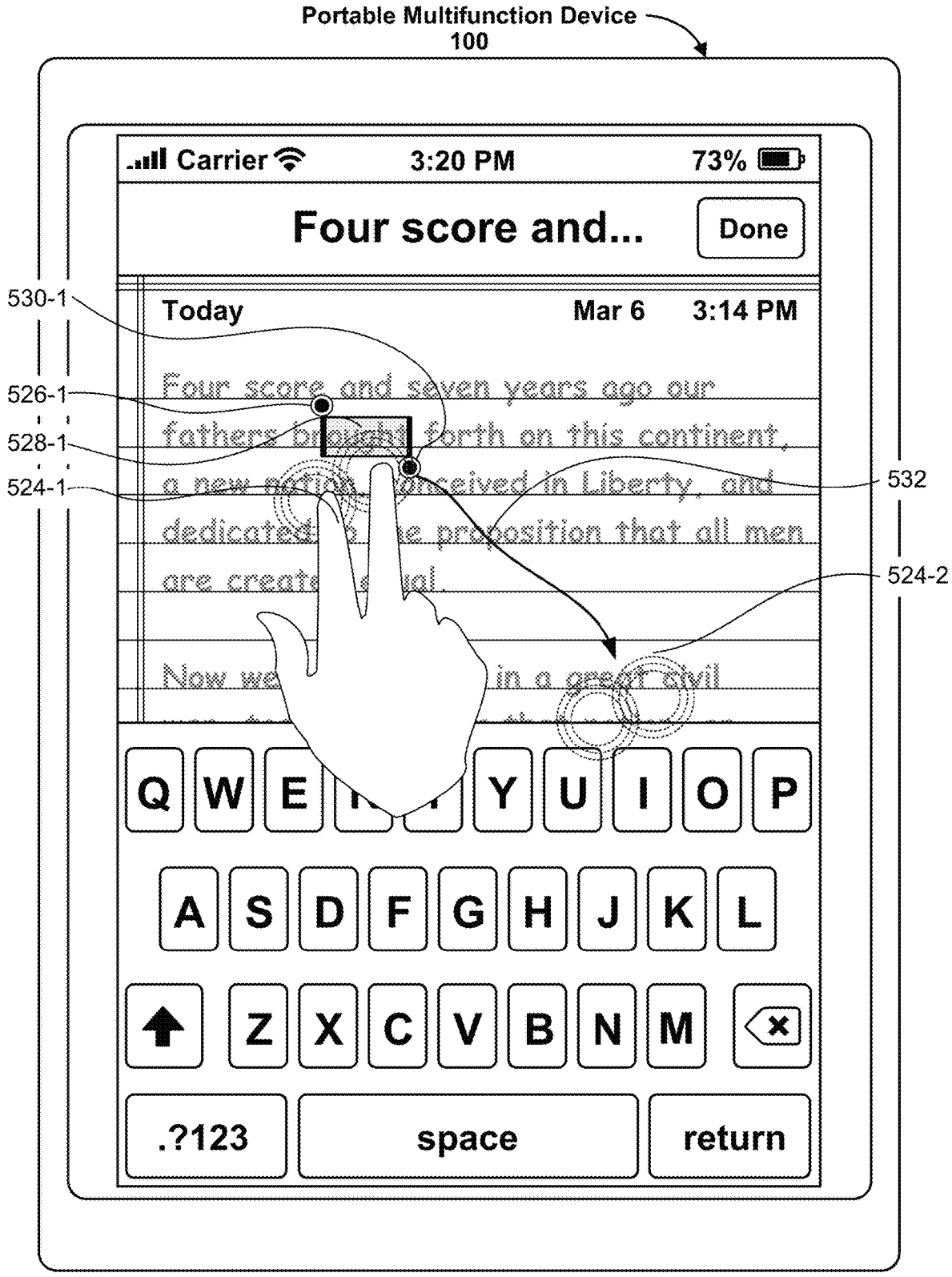

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our
fathers
forth on this continent,
a new
conceived in Liberty, and
dedicated
proposition that all men
are create
Now we
in a great civil
530-1
526-1
528-1
524-1
532
524-2
Q W E Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AK

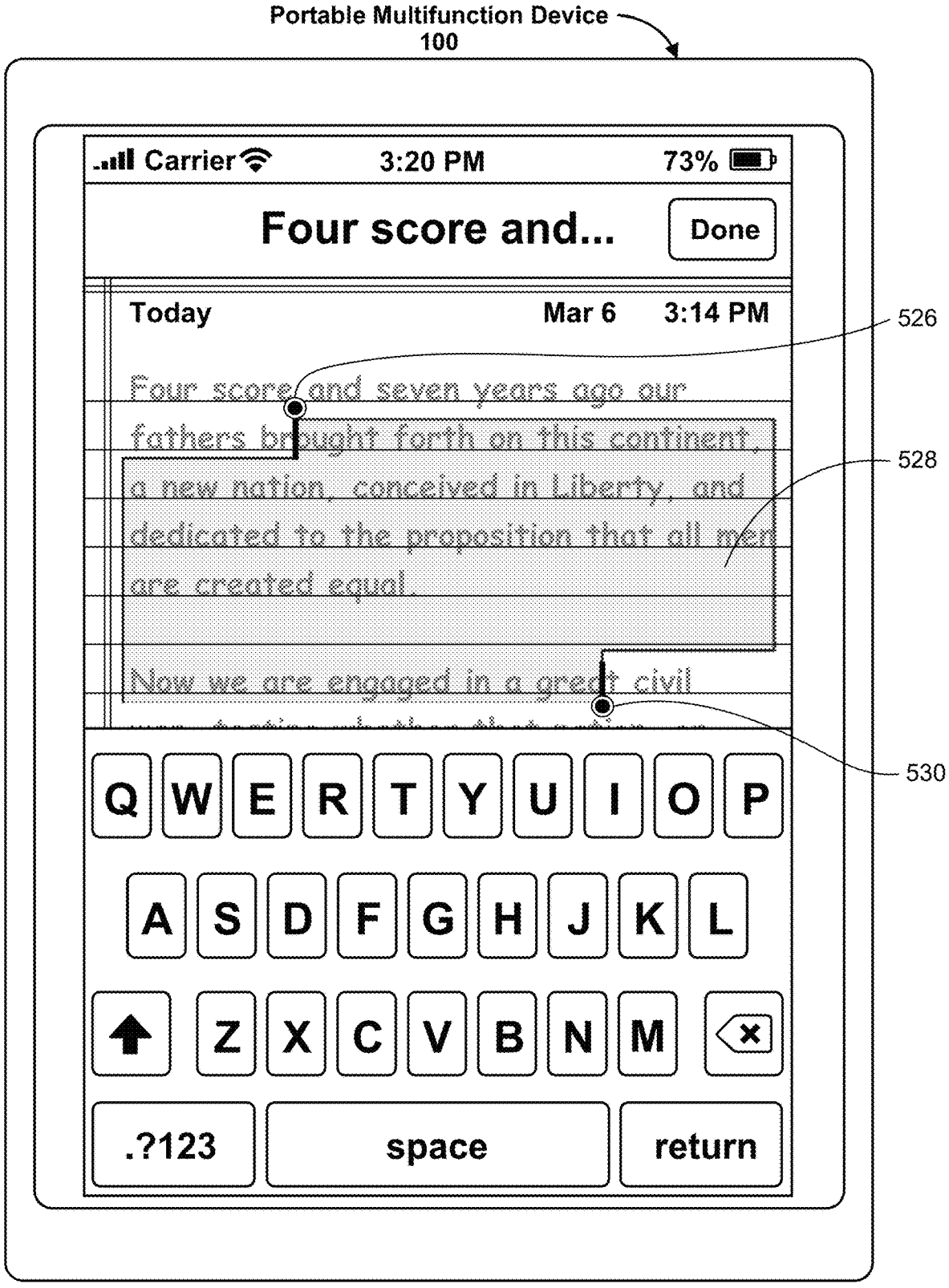

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
526
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
528
Now we are engaged in a great civil
530
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AL

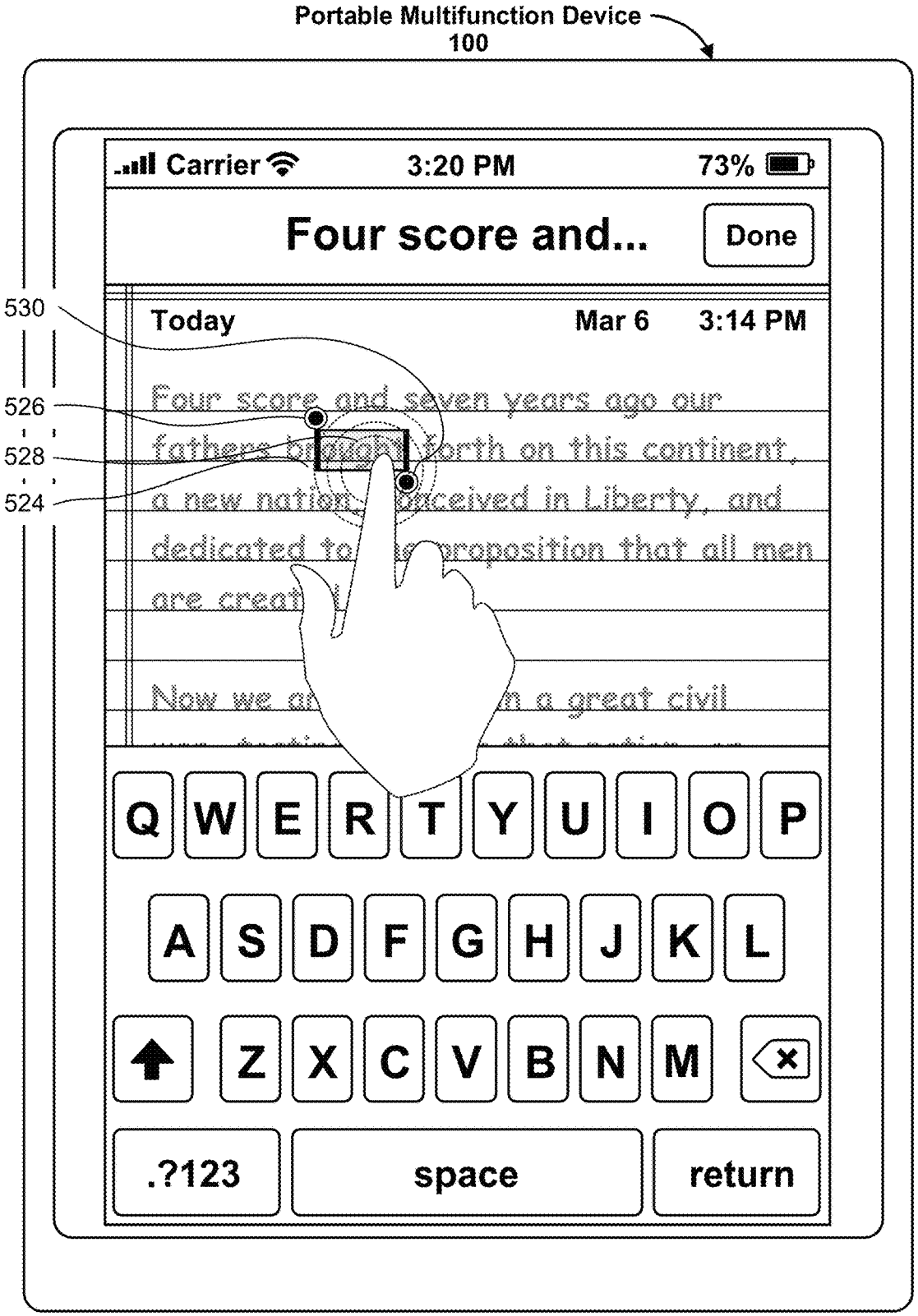

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
530
Today
Mar 6
3:14 PM
526
528
524
Four score and seven years ago our
fathers
forth on this continent,
a new nation,
nceived in Liberty, and
dedicated to
proposition that all men
are creat
Now we ar
n a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AM

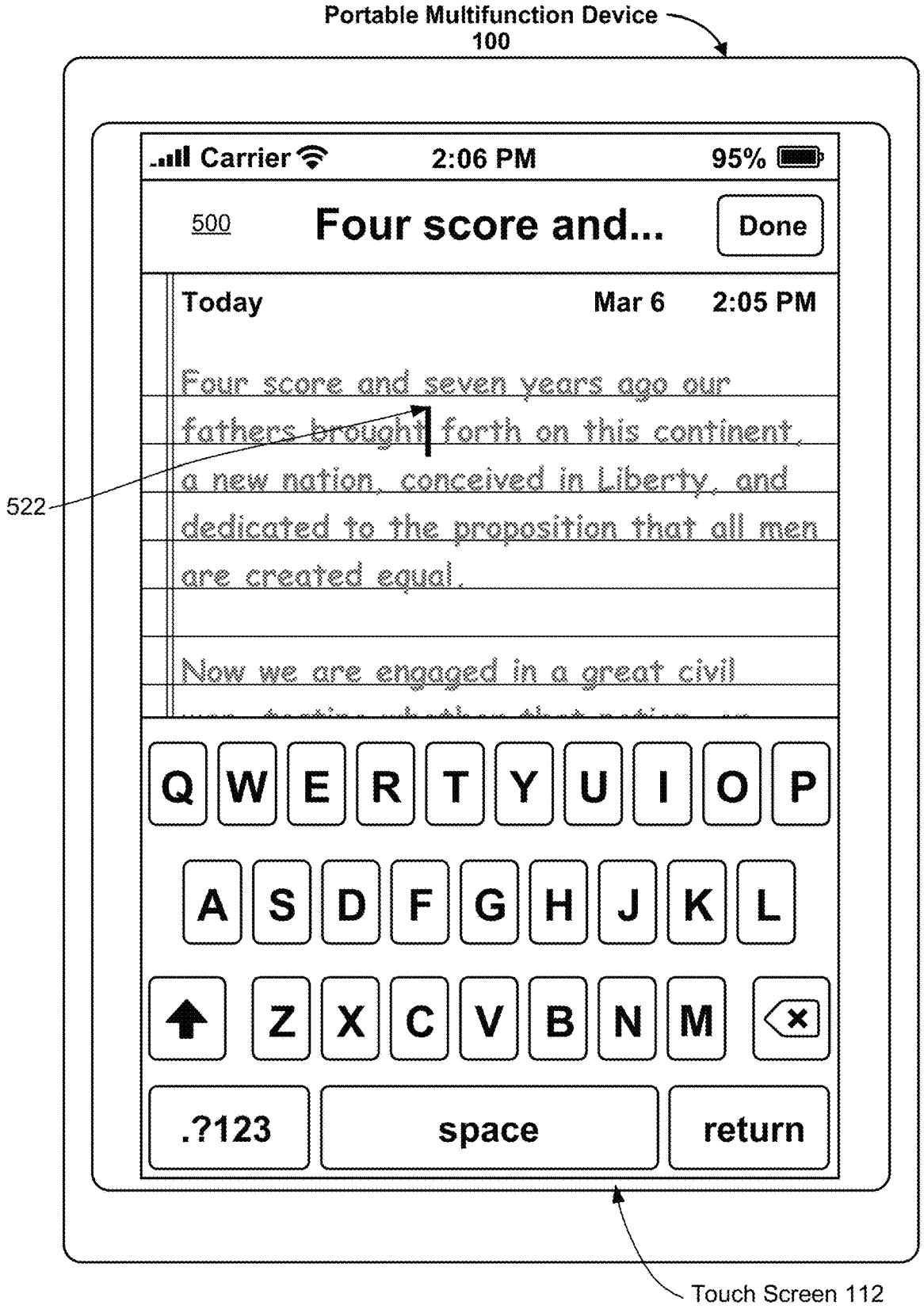

Portable Multifunction Device
100
Carrier
2:06 PM
95%
500
Four score and...
Done
Today
Mar 6
2:05 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
522
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5AN

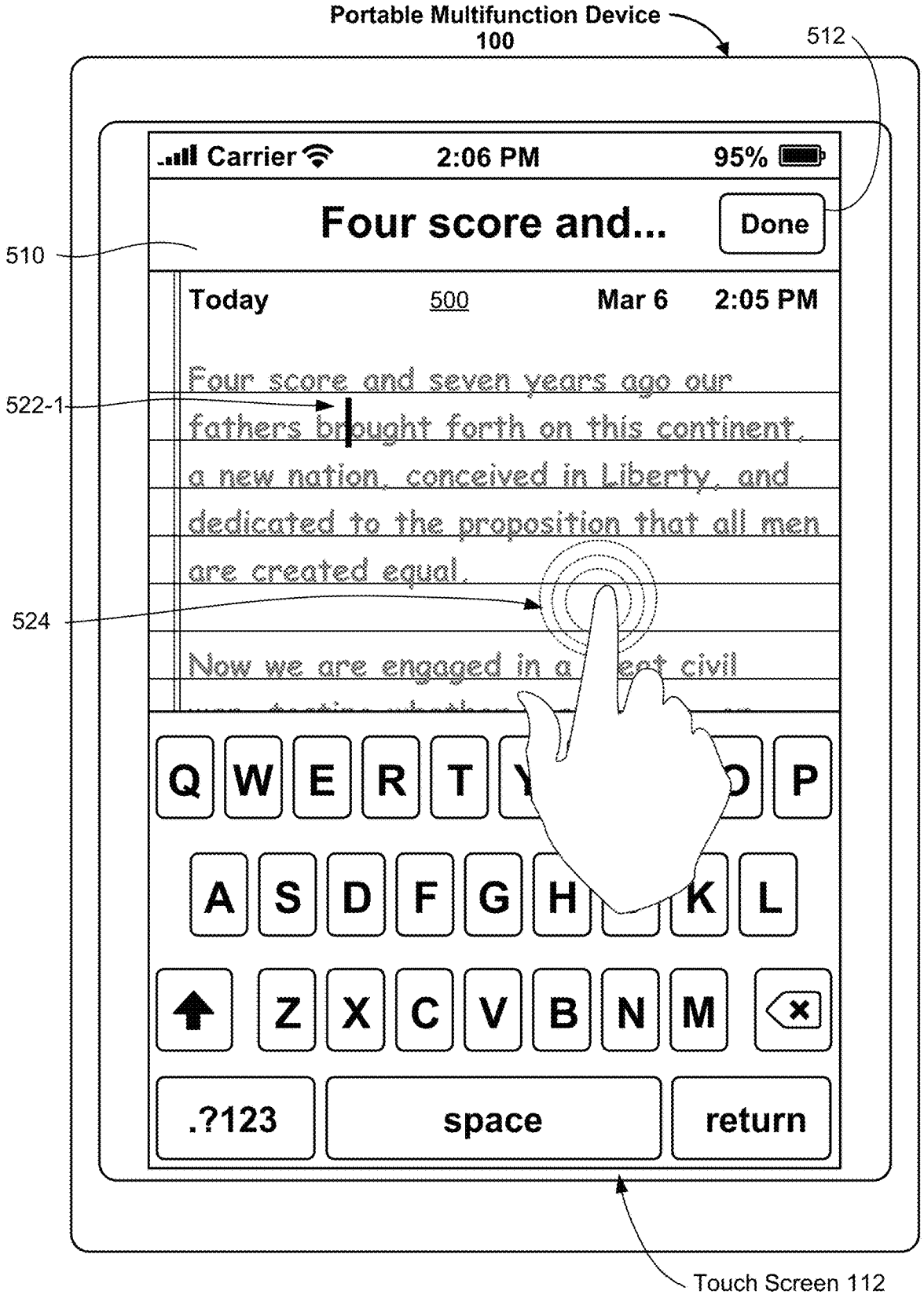

Portable Multifunction Device
100
512
Carrier
2:06 PM
95%
Four score and...
Done
510
Today
500
Mar 6
2:05 PM
522-1
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
524
Now we are engaged in a
civil
Q W E R T
P
A S D F G H K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5AO

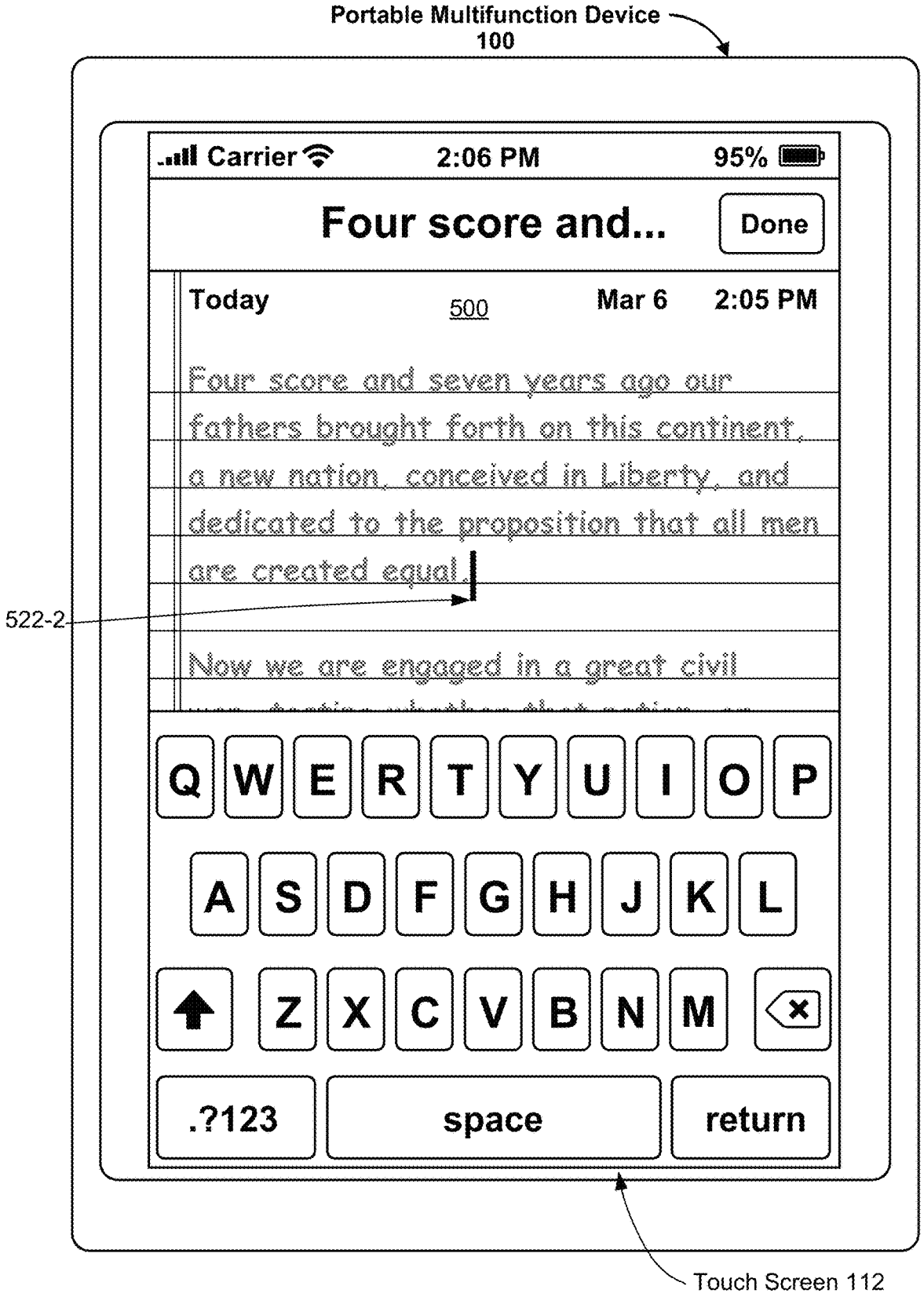

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
500
Mar 6
2:05 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
522-2
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5AP

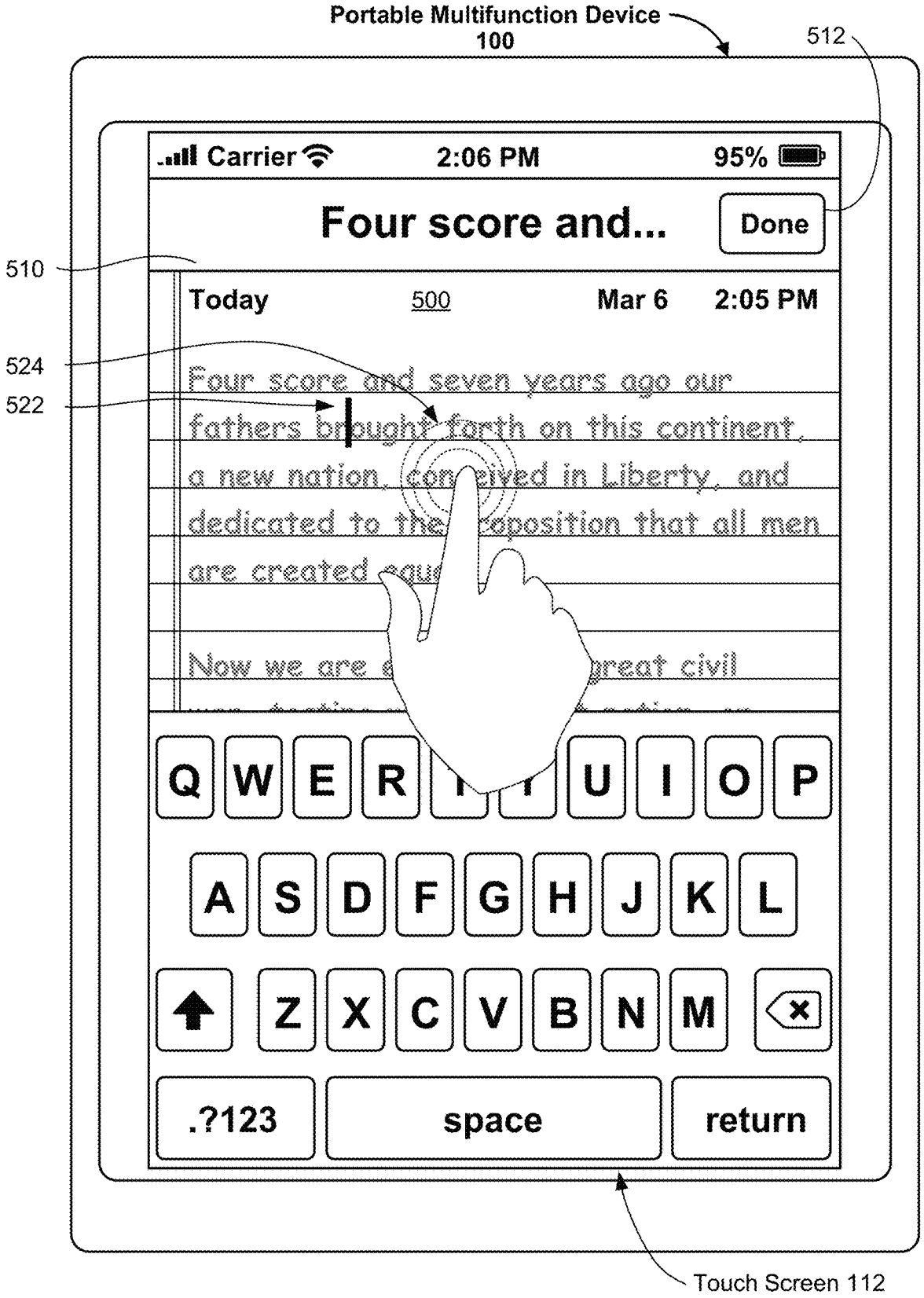

Portable Multifunction Device
100
512
Carrier
2:06 PM
95%
Four score and...
Done
510
Today
500
Mar 6
2:05 PM
524
522
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equ
Now we are
great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5AQ

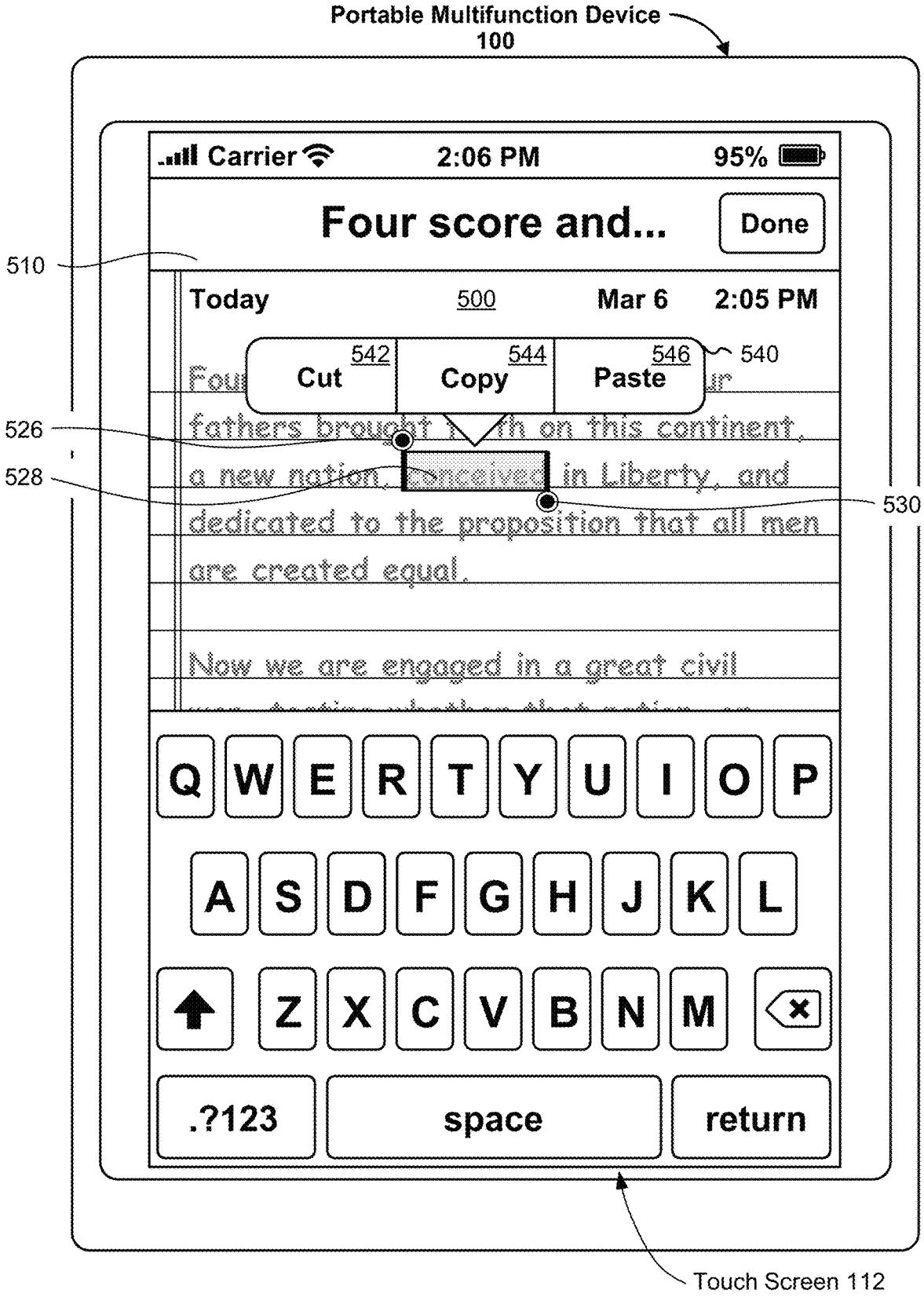

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
510
Today
500
Mar 6
2:05 PM
542
Cut
544
Copy
546
Paste
540
526
528
530
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 5AR

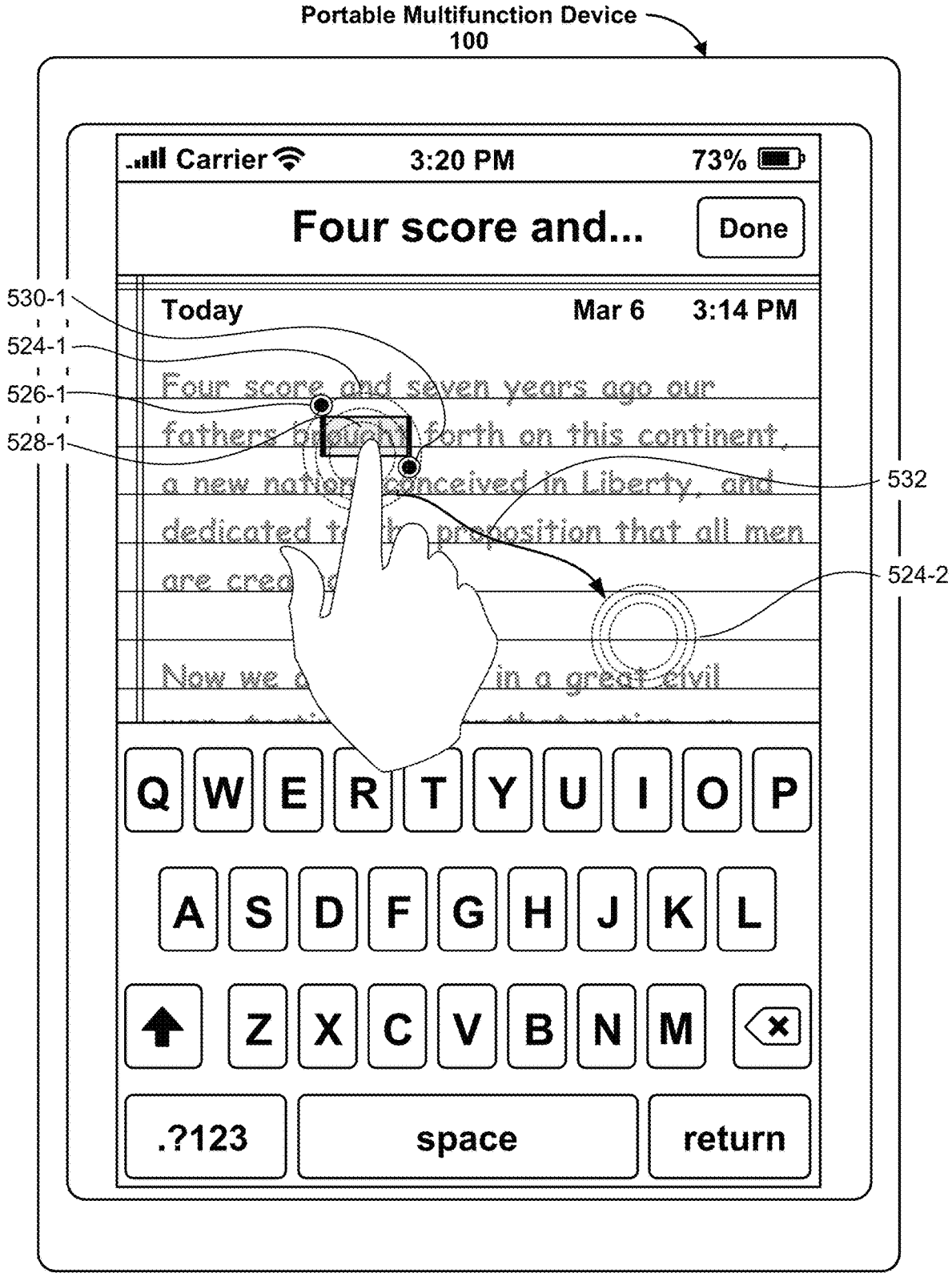

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our
fathers
forth on this continent,
a new nation
conceived in Liberty, and
dedicated
proposition that all men
are
Now we
in a great civil
530-1
524-1
526-1
528-1
532
524-2
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AS

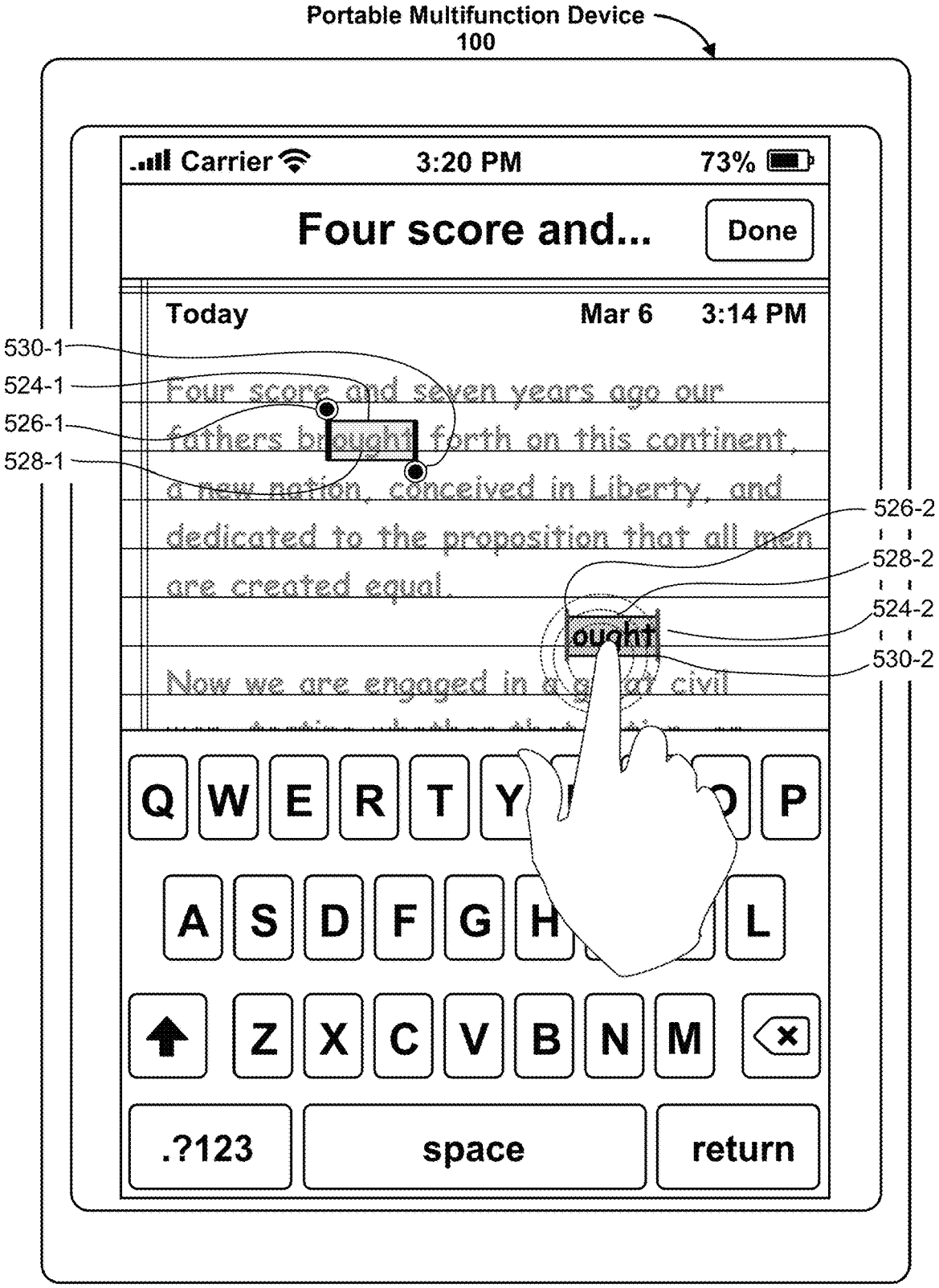

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
530-1
524-1
526-1
528-1
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
526-2
528-2
524-2
530-2
ought
Now we are engaged in a
civil
Q W E R T Y P
A S D F G H L
Z X C V B N M
.?123
space
return

Figure 5AT

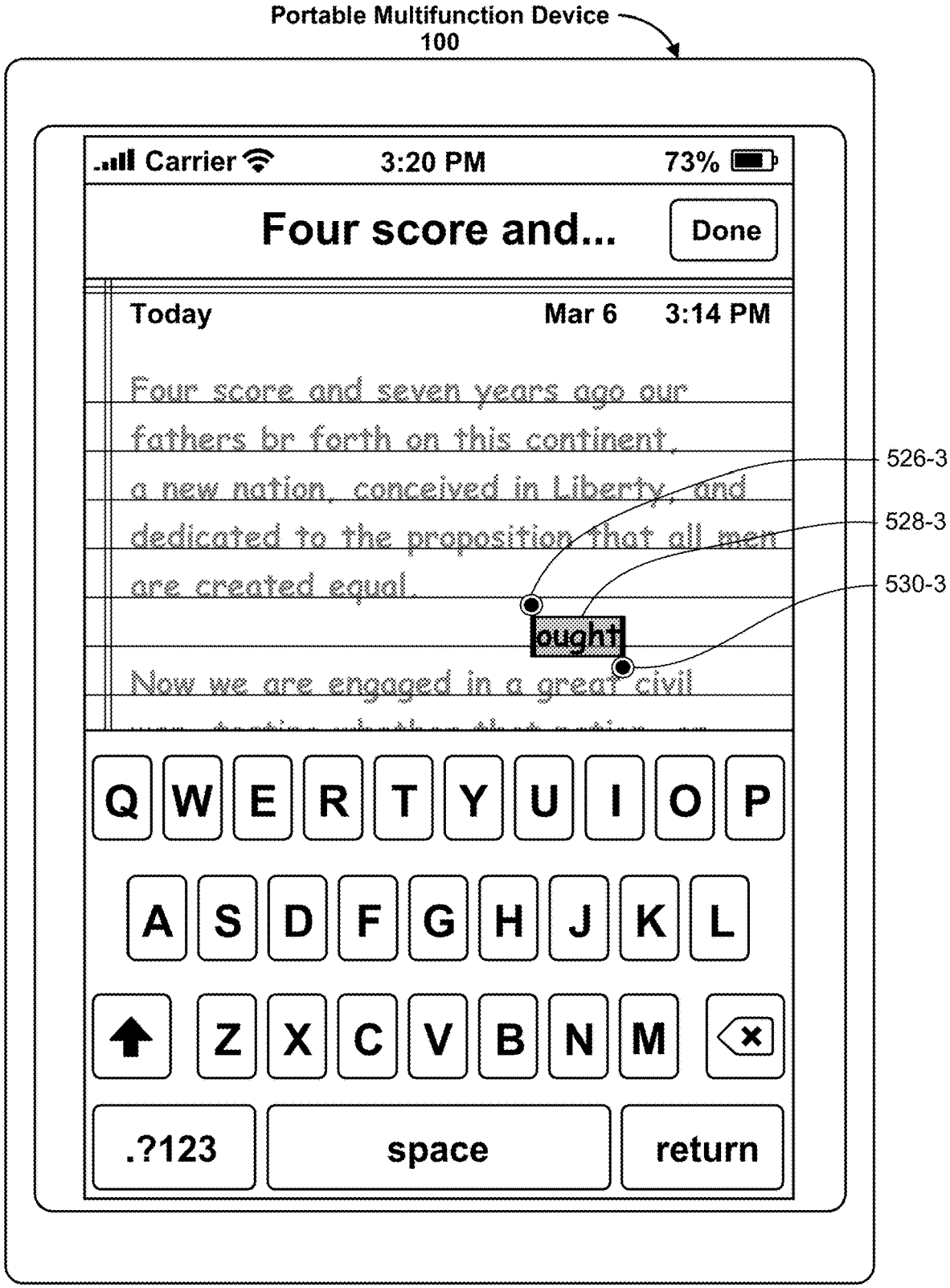

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our
fathers br forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
ought
Now we are engaged in a great civil
526-3
528-3
530-3
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AU

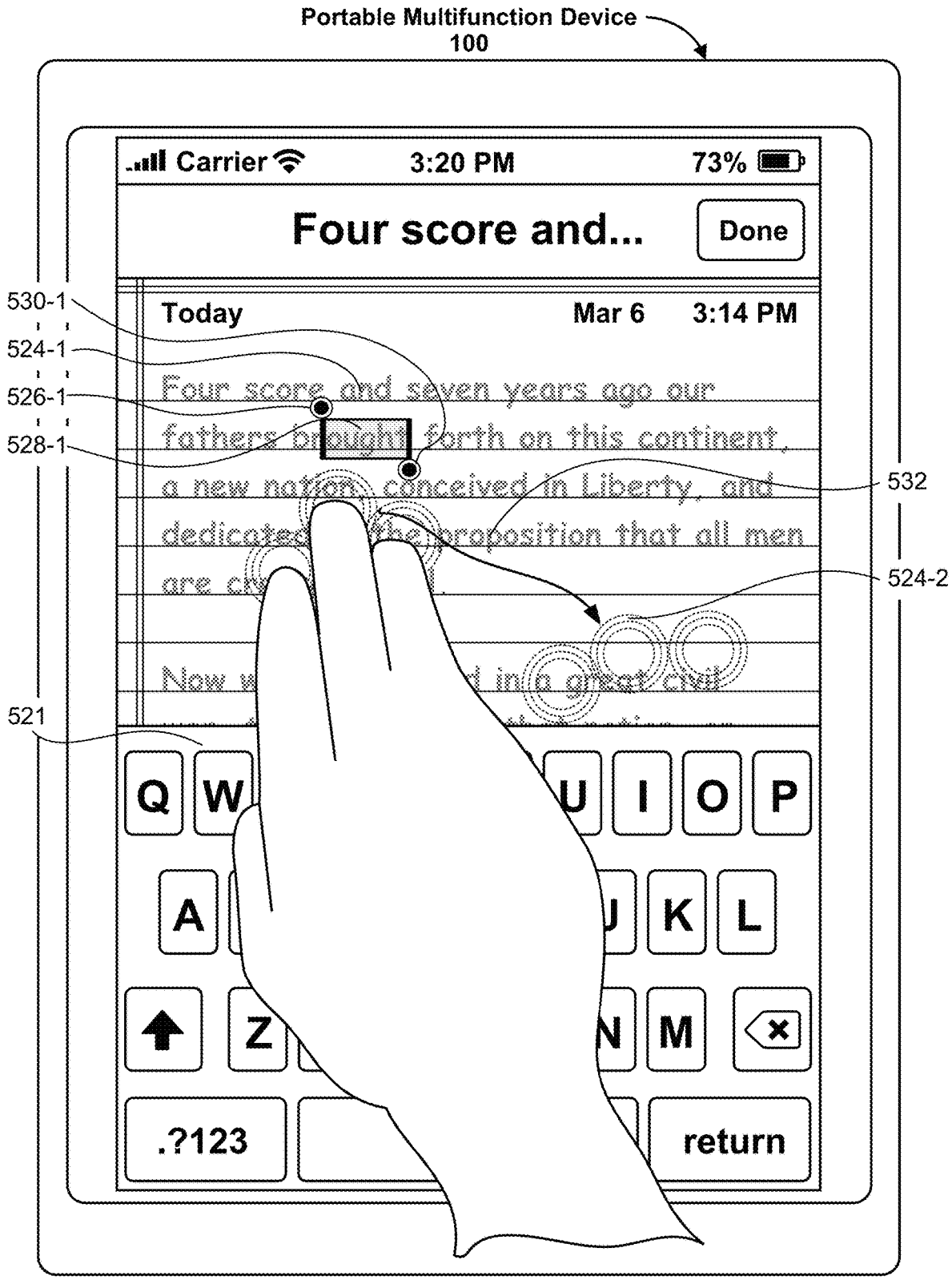

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are cr
Now w
in a great civil
530-1
524-1
526-1
528-1
532
524-2
521
Q
W
U
I
O
P
A
K
L
Z
M
.?123
return

Figure 5AV

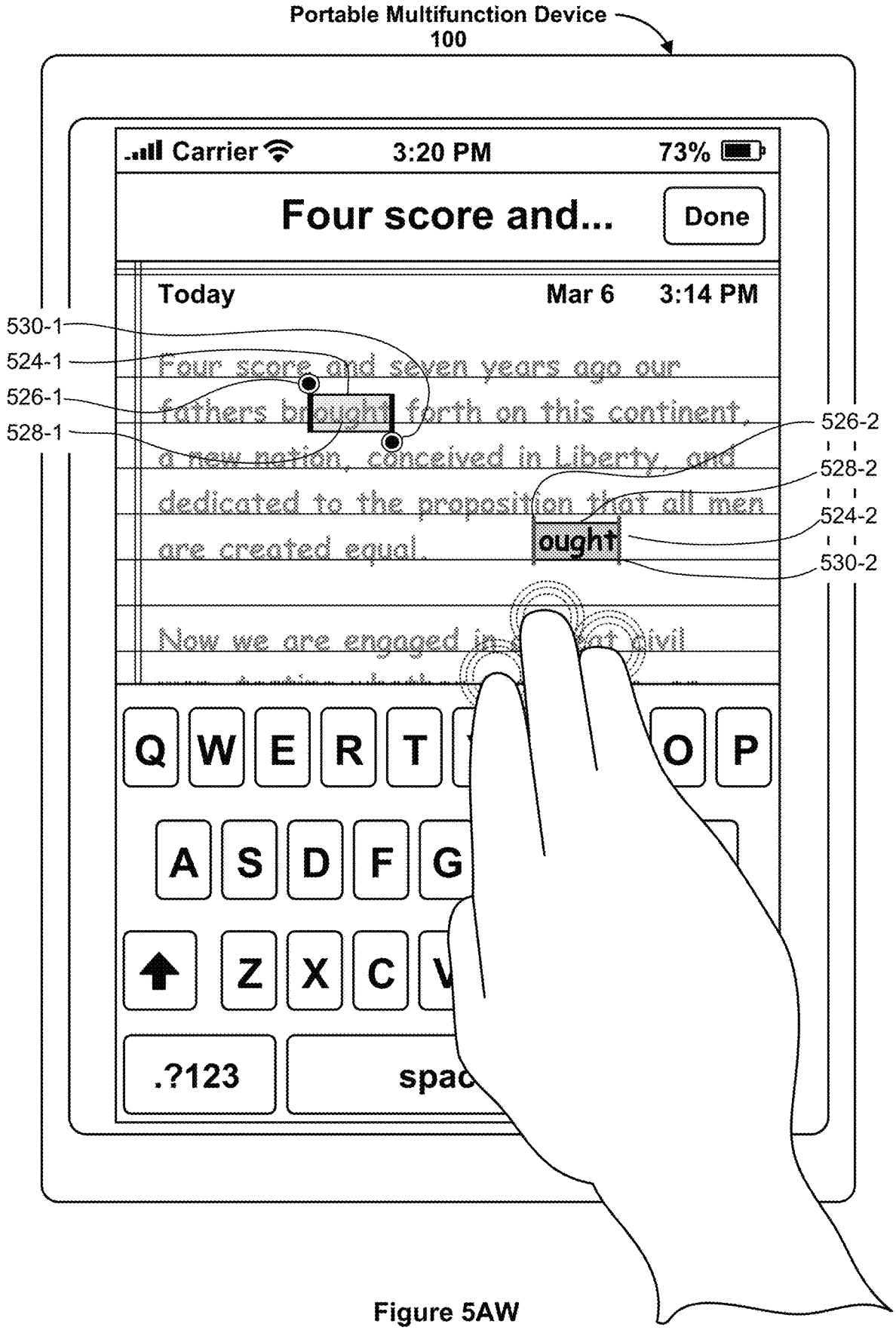

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
530-1
524-1
526-1
528-1
Four score and seven years ago our
fathers brought forth on this continent,
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
ought
526-2
528-2
524-2
530-2
Now we are engaged in
civil
Q W E R T
O P
A S D F G
Z X C
.?123
spac

Figure 5AW

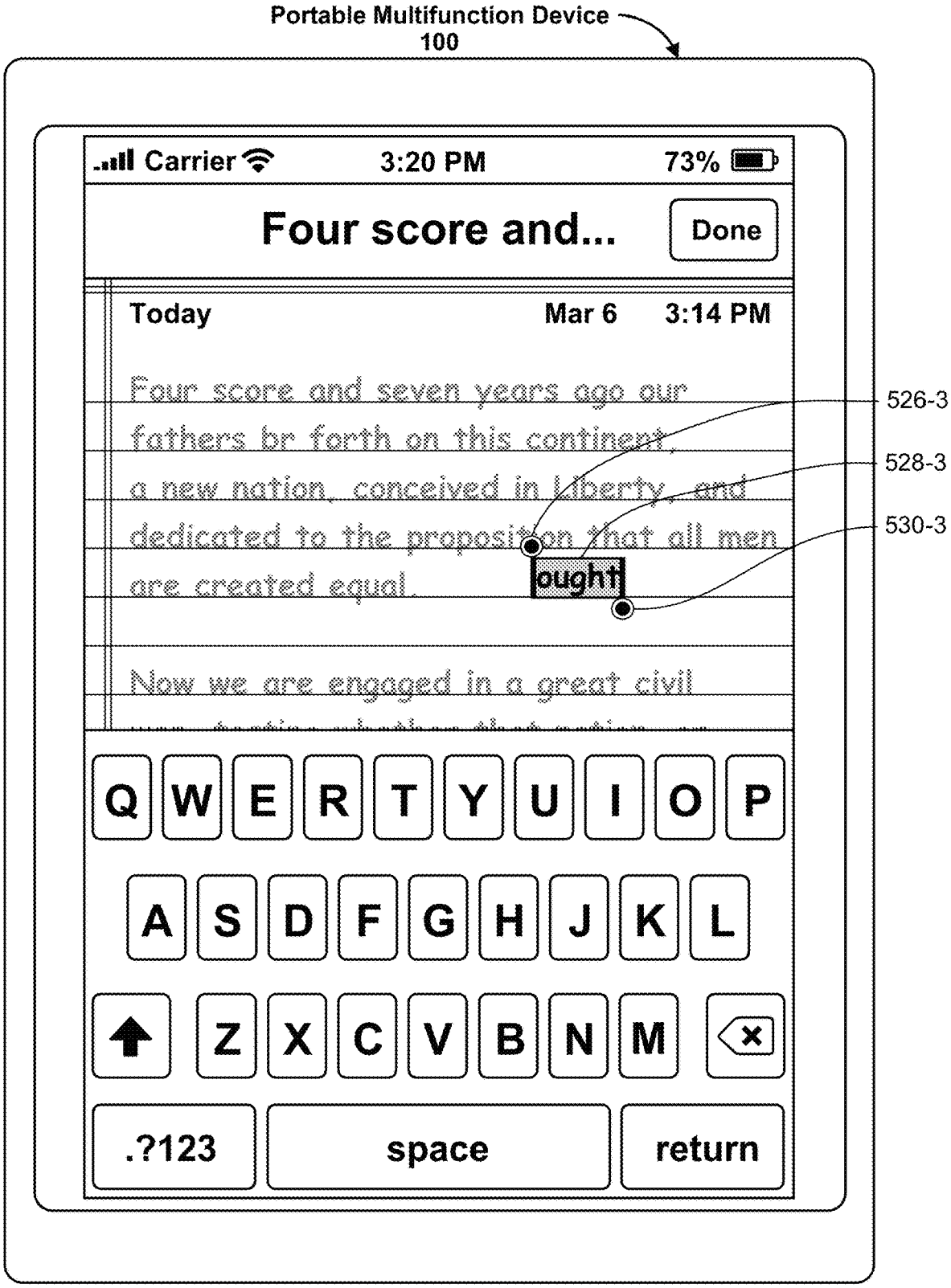

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Four score and seven years ago our fathers br forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
ought
Now we are engaged in a great civil
526-3
528-3
530-3
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return

Figure 5AX

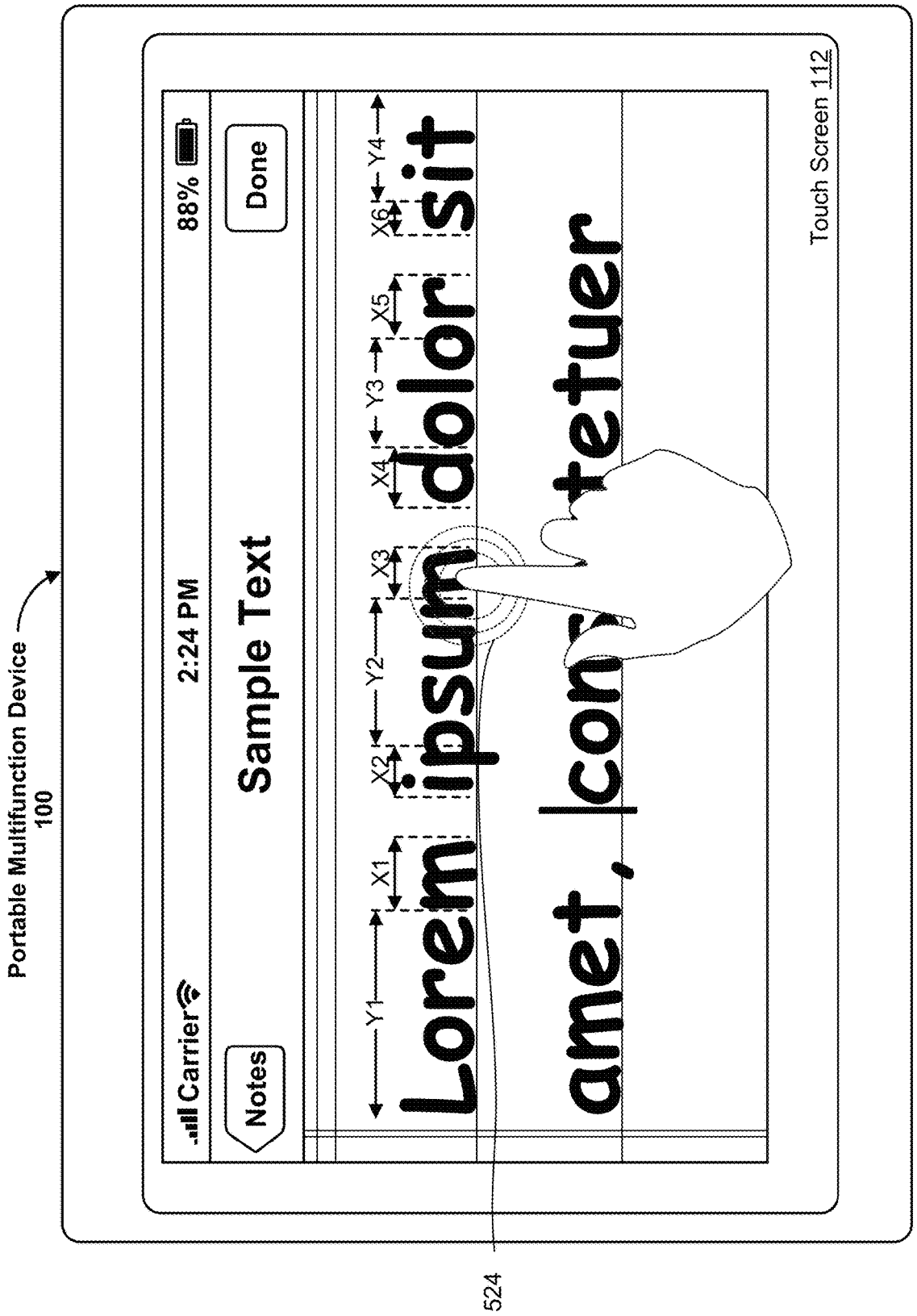

Portable Multifunction Device
100
Carrier
2:24 PM
88%
Notes
Sample Text
Done
Lorem ipsum dolor sit
amet, consectetuer
Y1
X1
X2
Y2
X3
X4
Y3
X5
X6
Y4
Touch Screen 112
524

Figure 6A

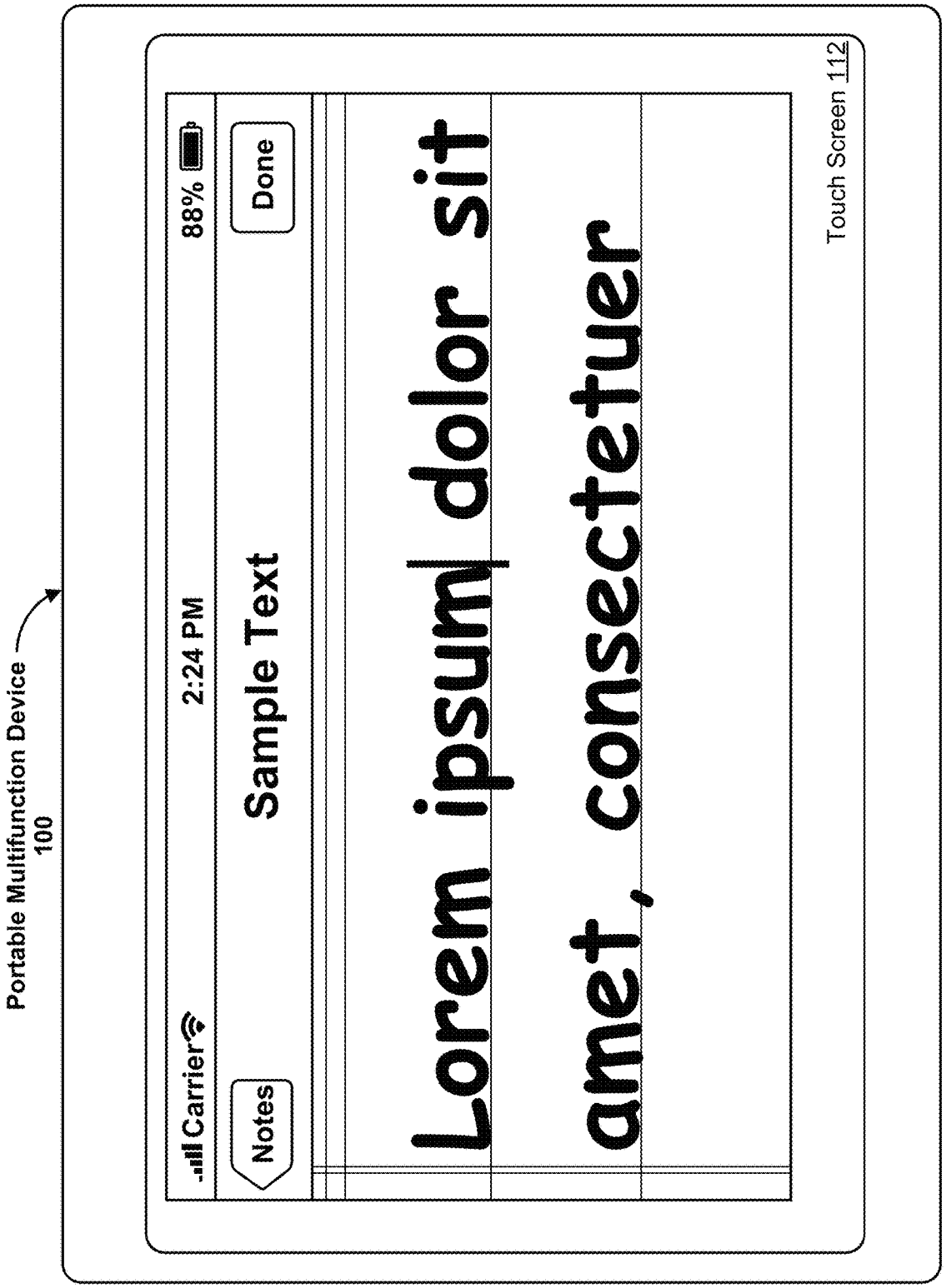

Portable Multifunction Device
100
Carrier
2:24 PM
88%
Notes
Sample Text
Done
Lorem ipsum dolor sit amet, consectetuer
Touch Screen 112

Figure 6B

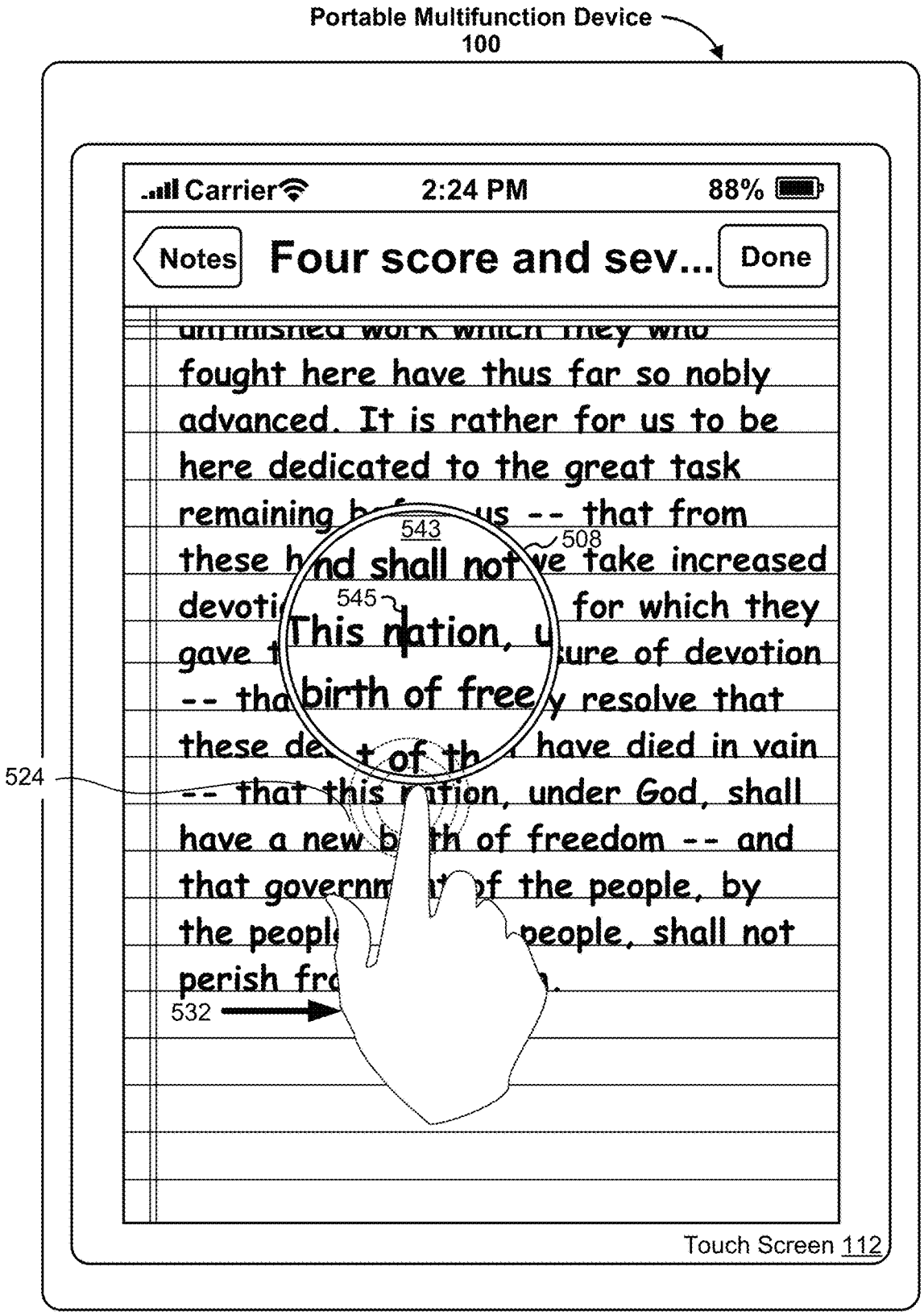

Portable Multifunction Device
100
Carrier
2:24 PM
88%
Notes
Four score and sev...
Done
fought here have thus far so nobly
advanced. It is rather for us to be
here dedicated to the great task
remaining
543
508
545
524
532
Touch Screen 112

Figure 6C

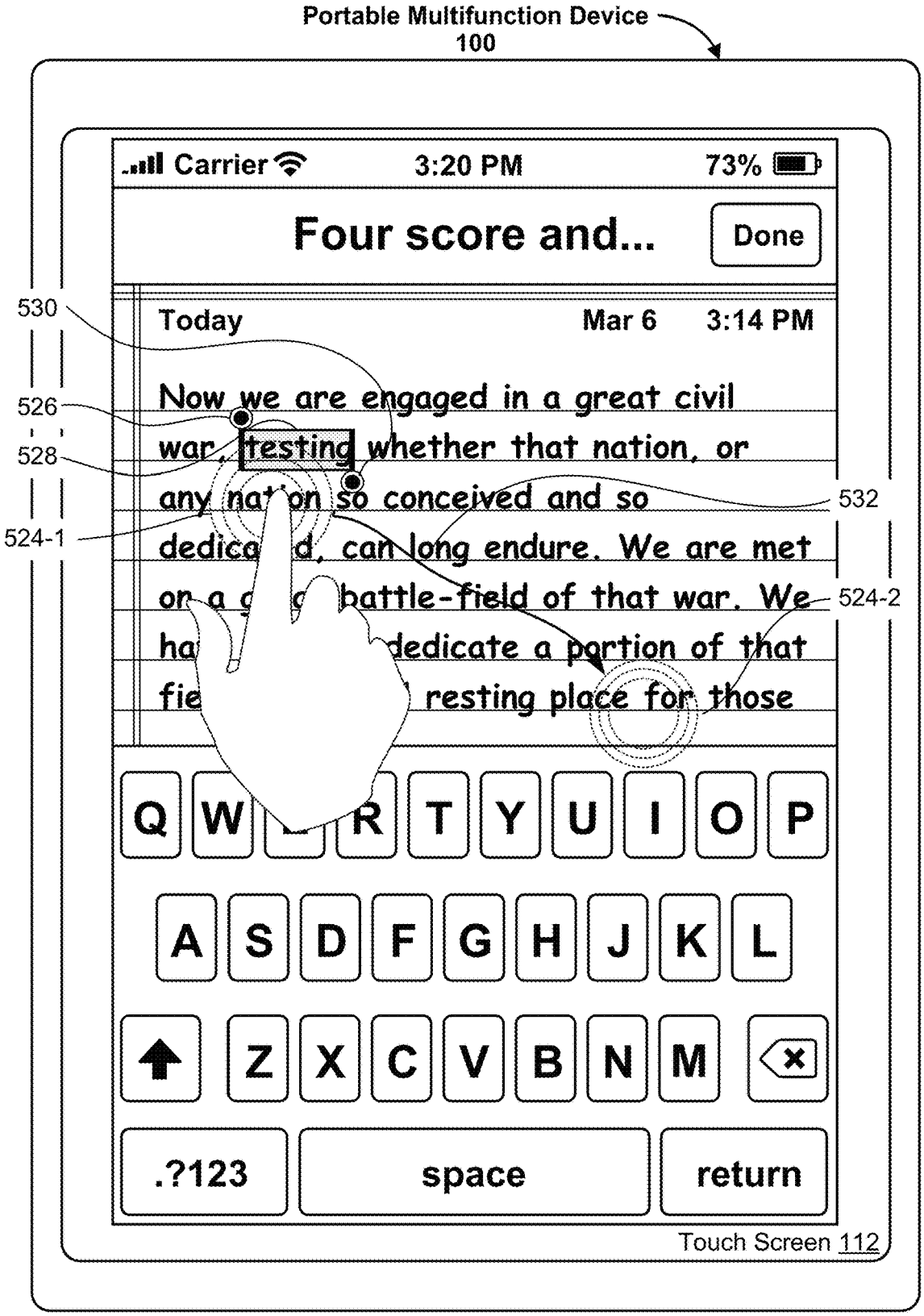

Portable Multifunction Device
100
Carrier
3:20 PM
73%
Four score and...
Done
Today
Mar 6
3:14 PM
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We are met
on a great battle-field of that war. We
have come to dedicate a portion of that
field, as a resting place for those
530
526
528
524-1
532
524-2
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 6D

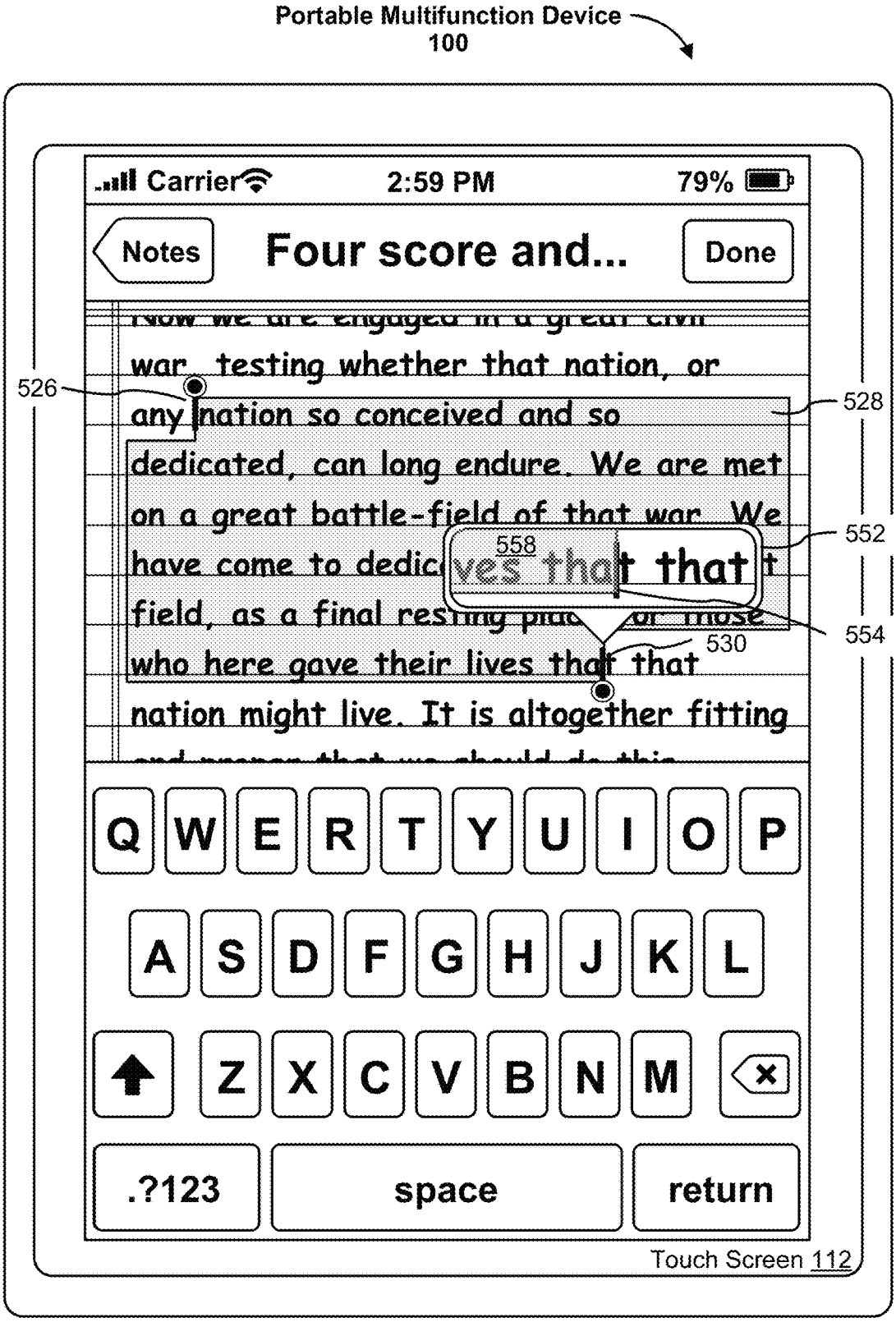

Portable Multifunction Device
100
Carrier
2:59 PM
79%
Notes
Four score and...
Done
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We are met
on a great battle-field of that war. We
have come to dedic ves that that
field, as a final resting plac of those
who here gave their lives that that
nation might live. It is altogether fitting
526
528
552
558
554
530
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 6E

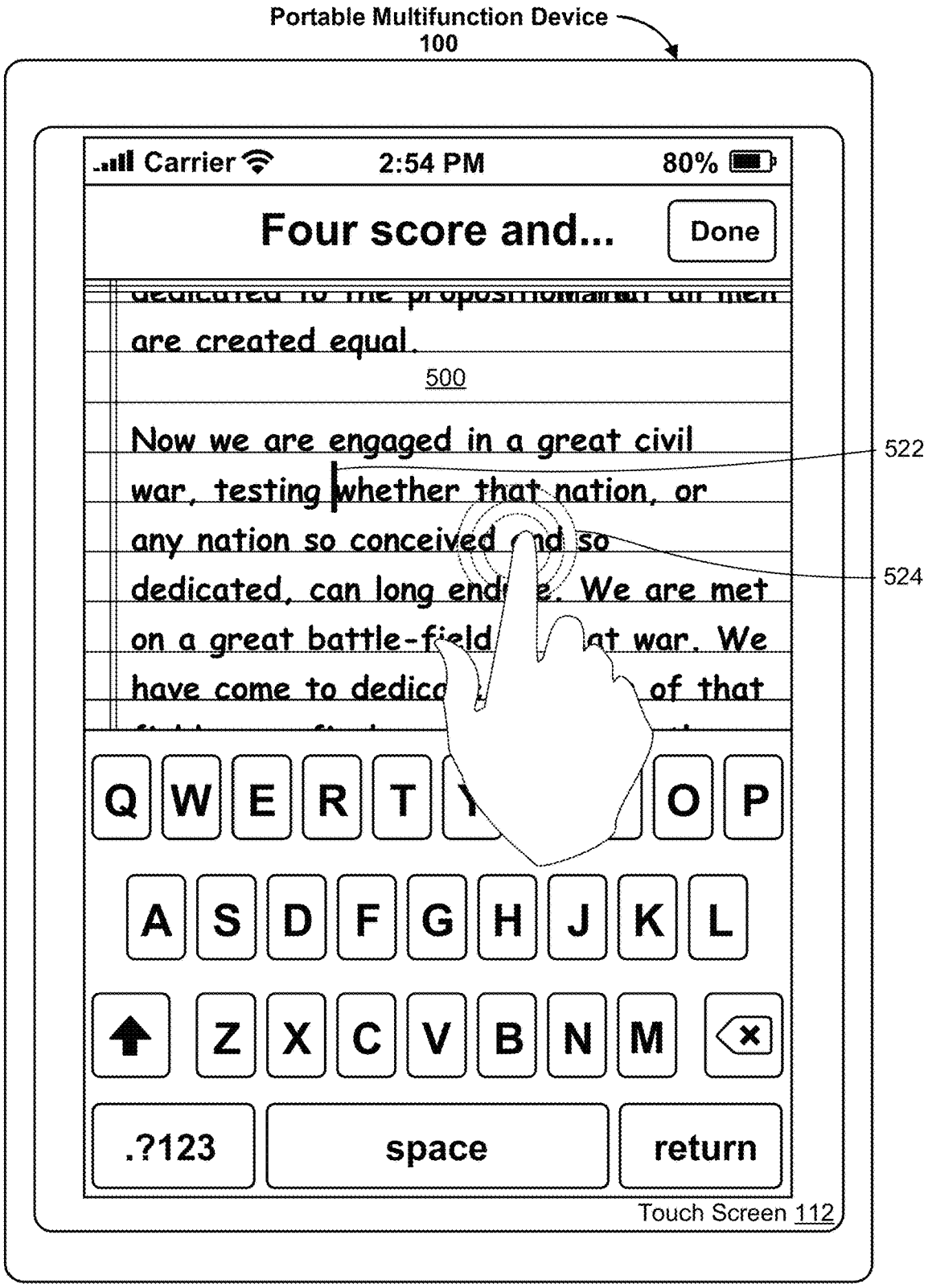

Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
are created equal.
500
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We are met
on a great battle-field of that war. We
have come to dedicate of that
522
524
Q W E R T Y O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 6F

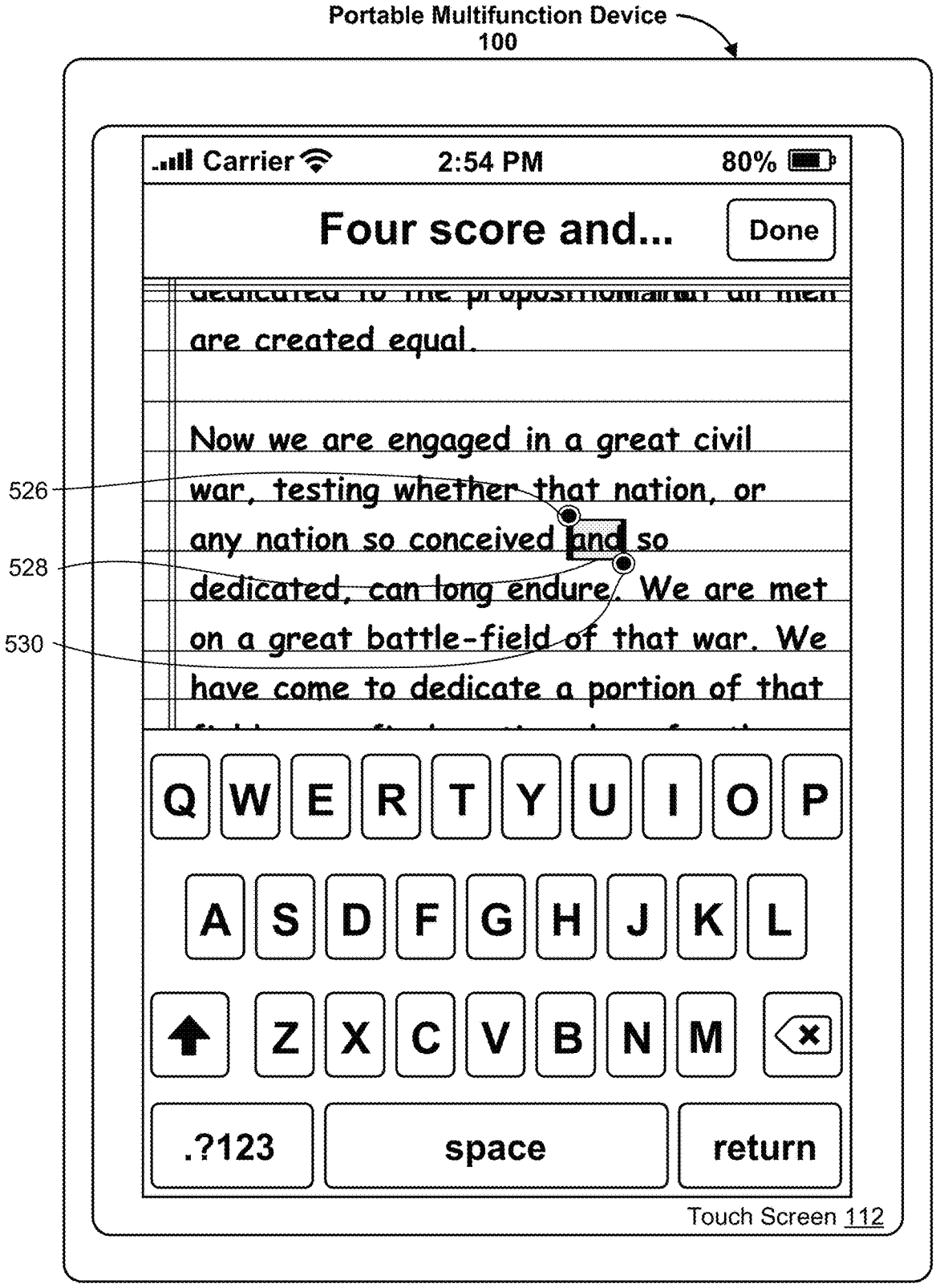

Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
are created equal.
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We are met
on a great battle-field of that war. We
have come to dedicate a portion of that
526
528
530
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 6G

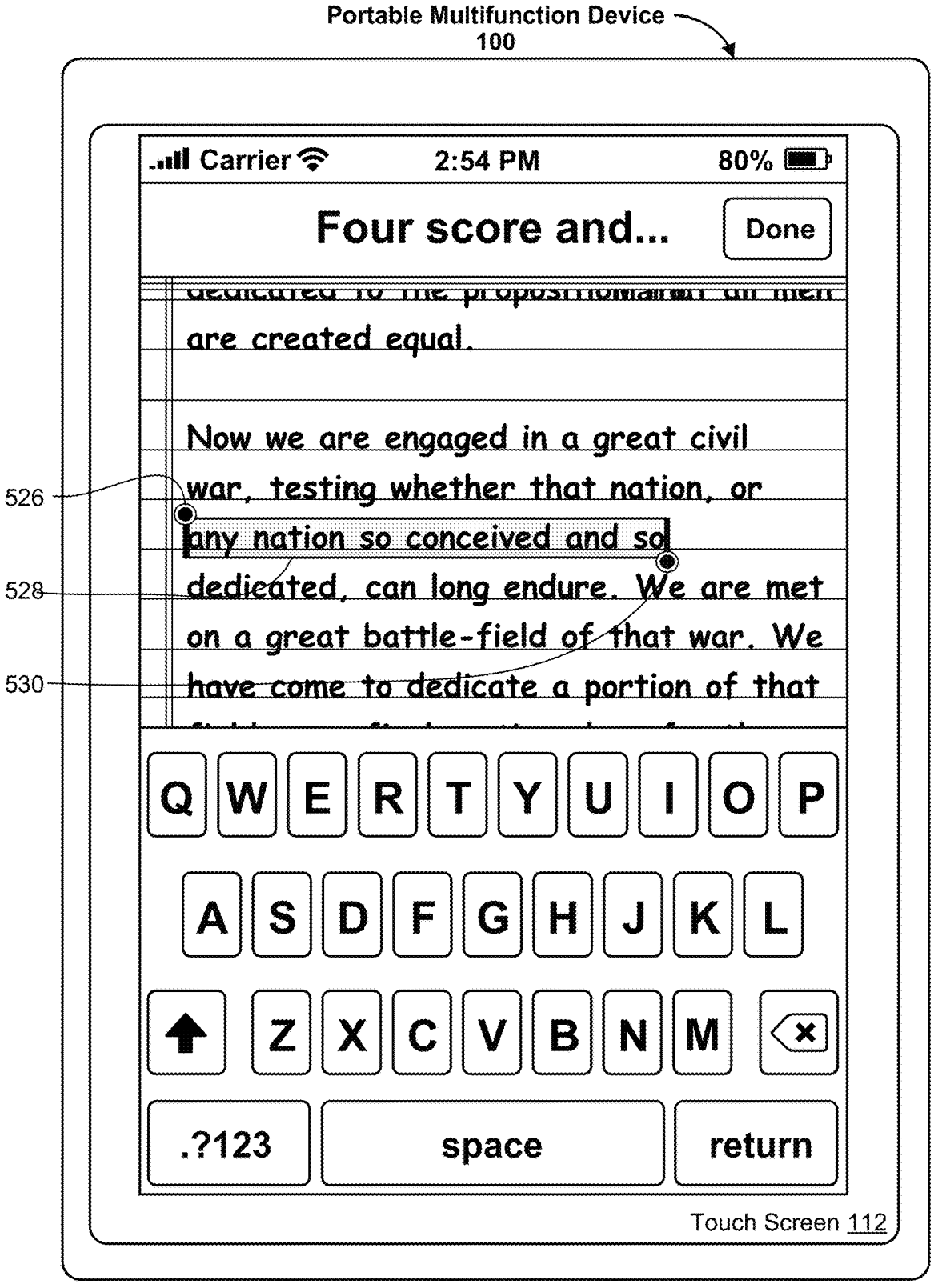

Portable Multifunction Device
100
Carrier
2:54 PM
80%
Four score and...
Done
are created equal.
Now we are engaged in a great civil
war, testing whether that nation, or
any nation so conceived and so
dedicated, can long endure. We are met
on a great battle-field of that war. We
have come to dedicate a portion of that
526
528
530
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 6H

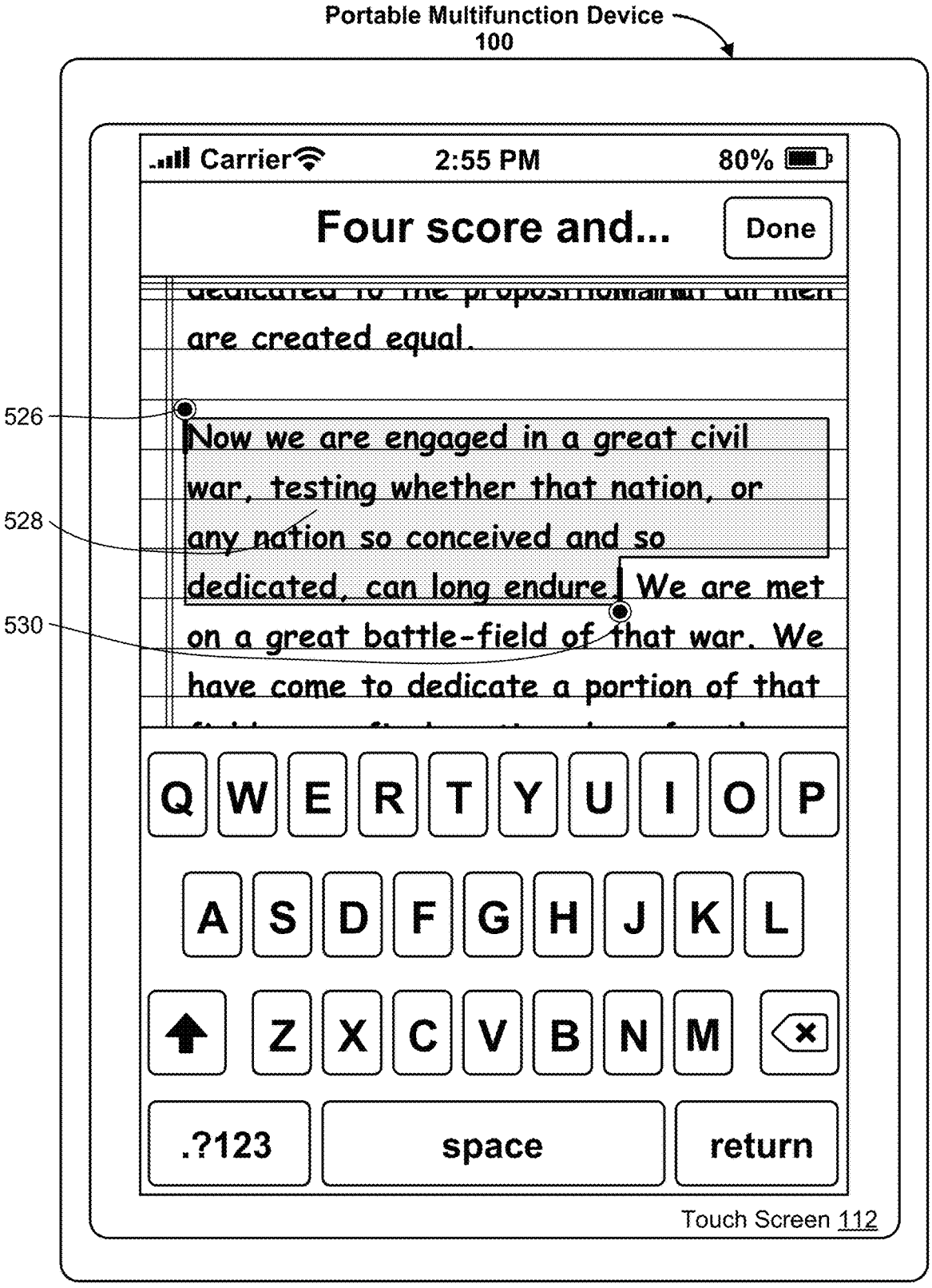

Portable Multifunction Device
100
Carrier
2:55 PM
80%
Four score and...
Done
are created equal.
526
528
530
Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 6I

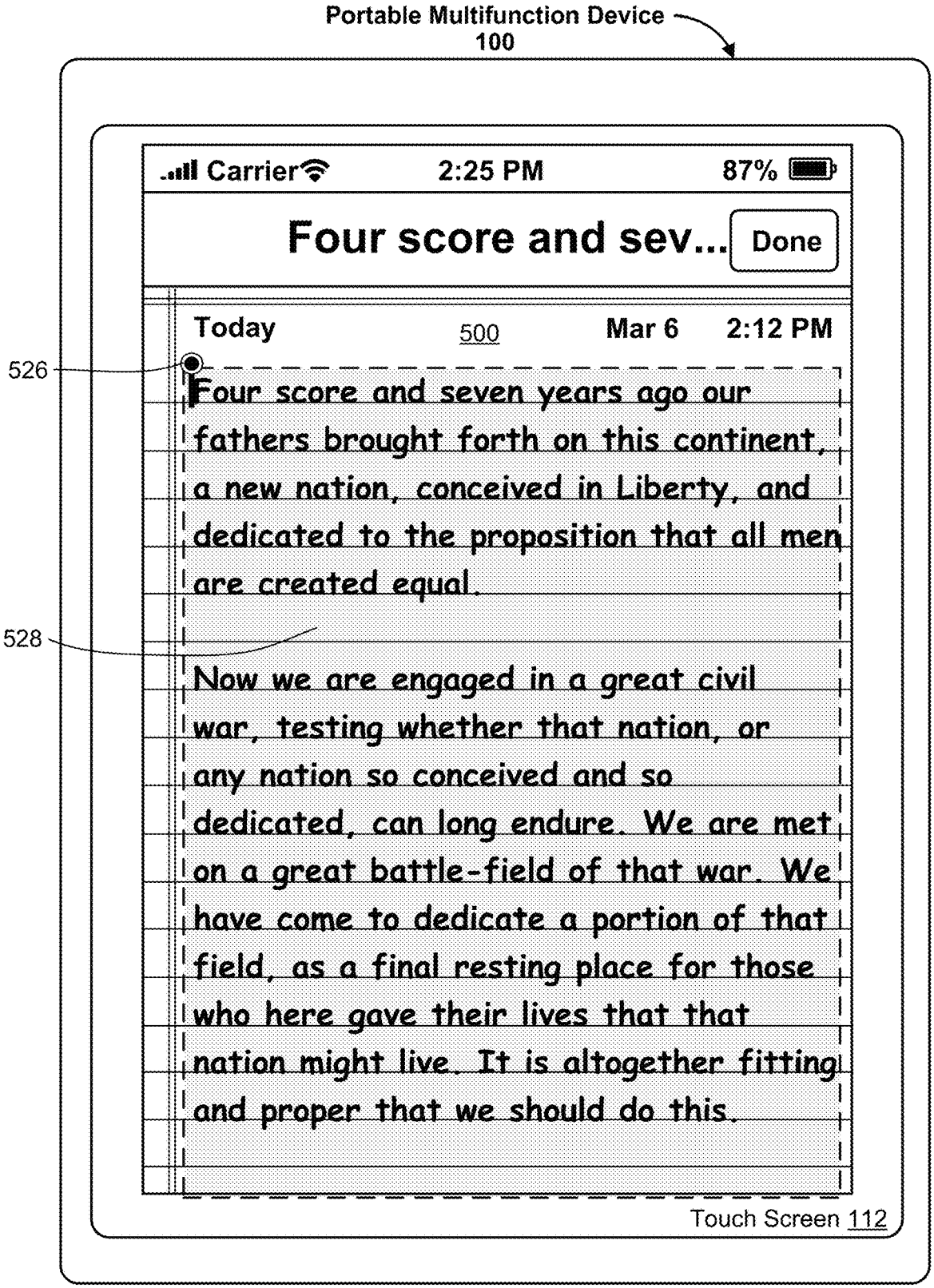

Portable Multifunction Device
100
Carrier
2:25 PM
87%
Four score and sev...
Done
Today
500
Mar 6
2:12 PM
526
528
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.
Touch Screen 112

Figure 6J

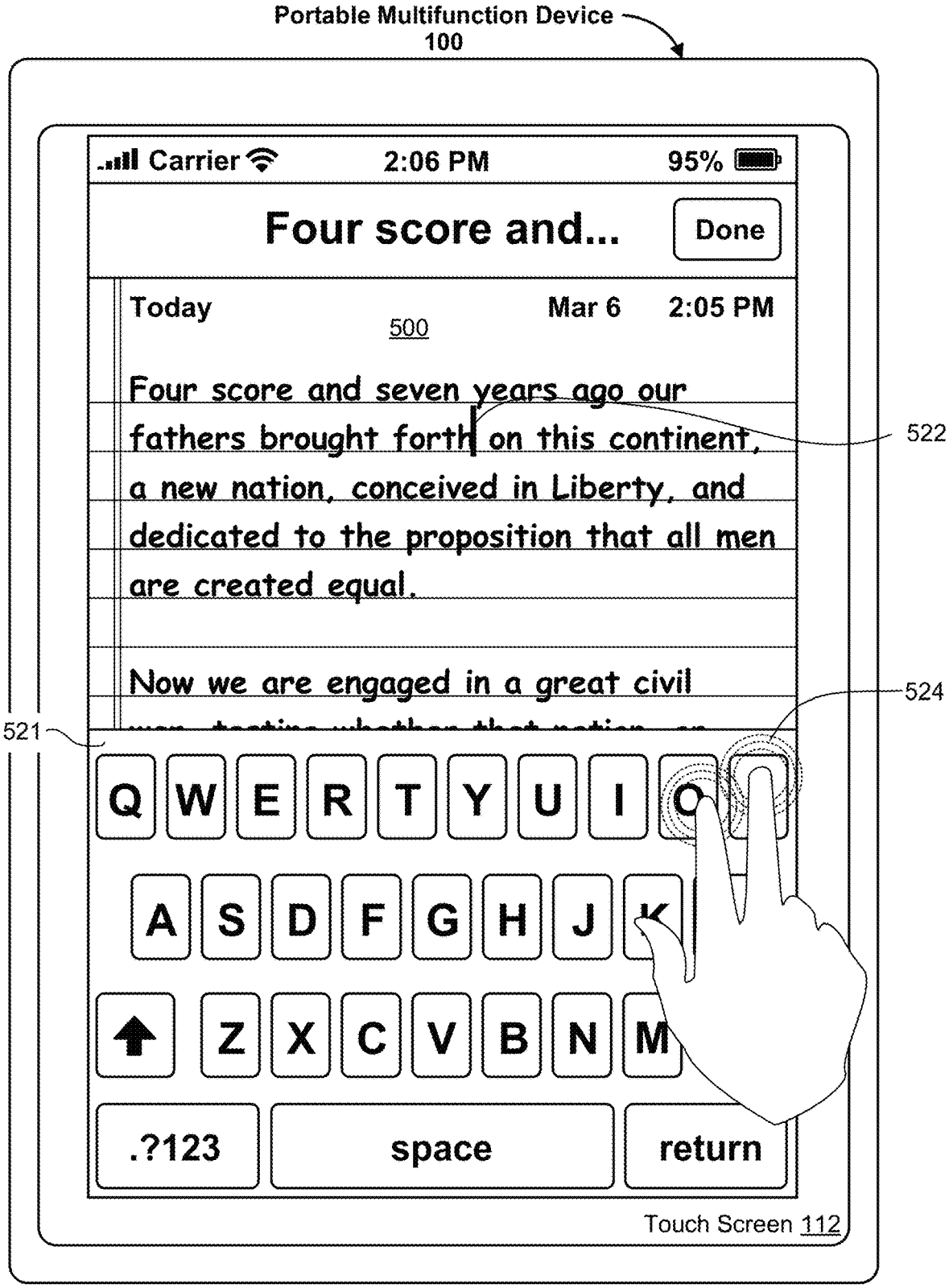

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
Mar 6
2:05 PM
500
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil
522
524
521
Q W E R T Y U I O
A S D F G H J K
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 7A

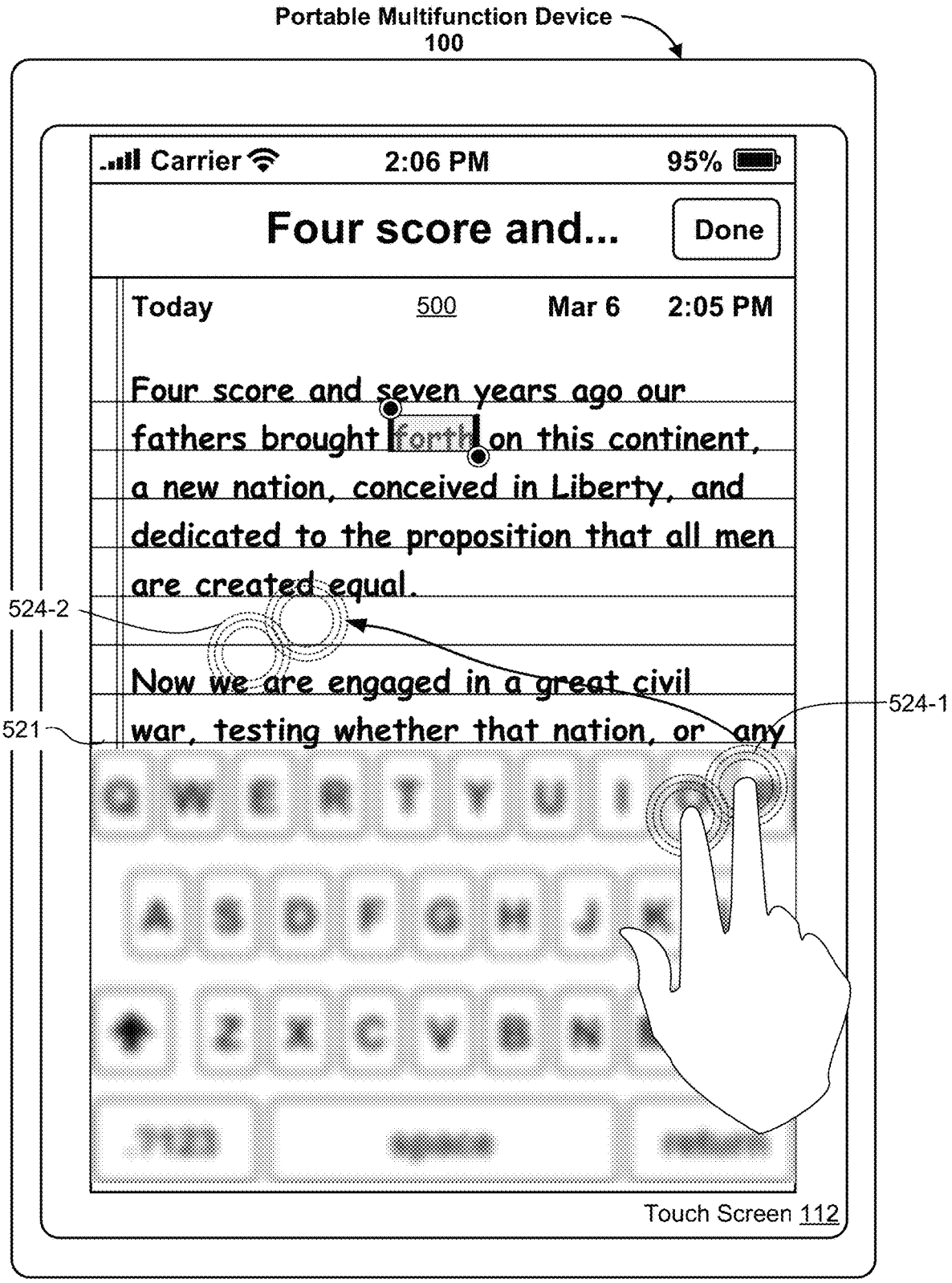

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
500
Mar 6
2:05 PM
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil war, testing whether that nation, or any
524-2
521
524-1
Touch Screen 112

Figure 7B

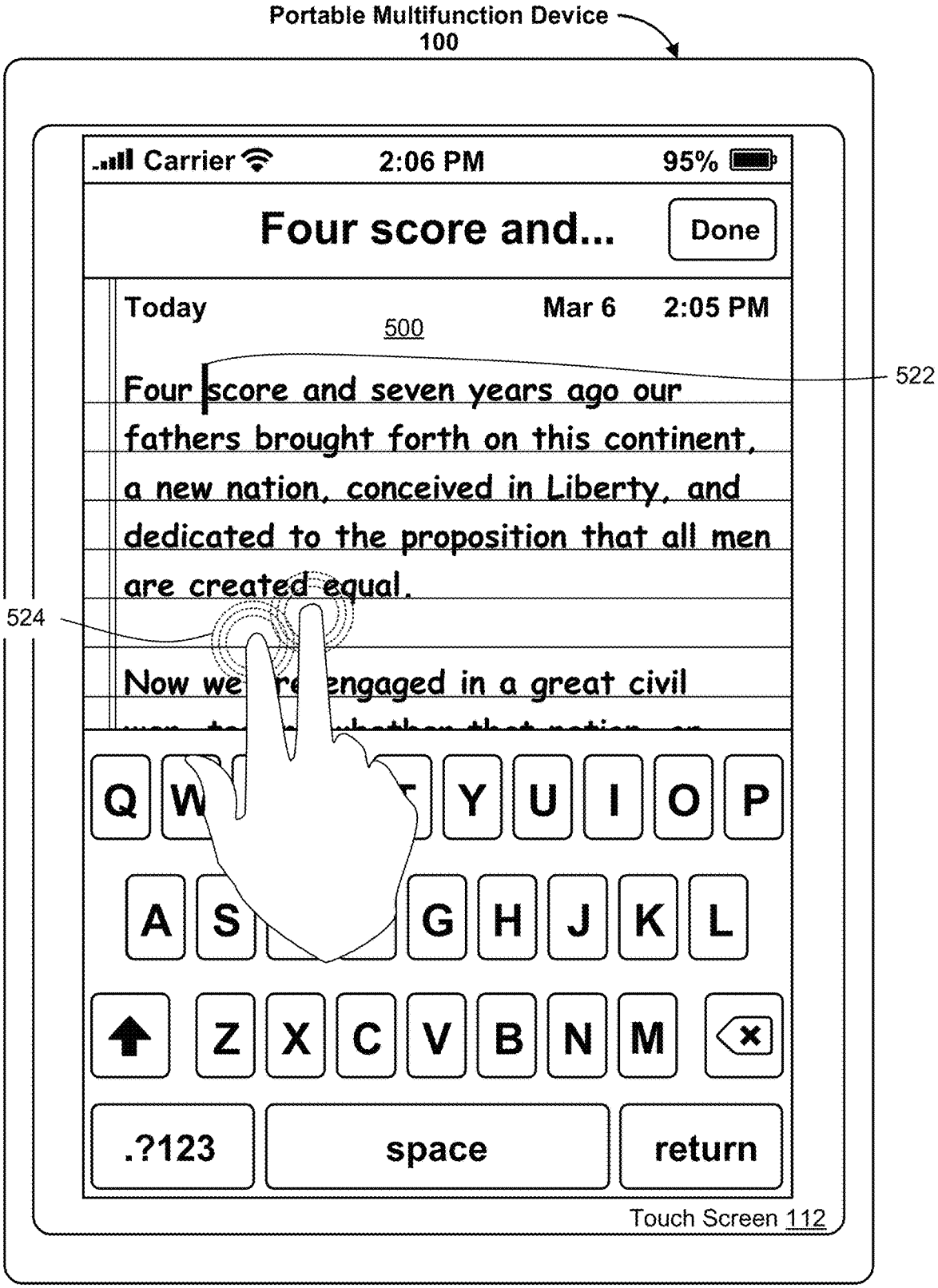

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
Mar 6
2:05 PM
500
522
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
524
Now we engaged in a great civil
Q W Y U I O P
A S G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 7C

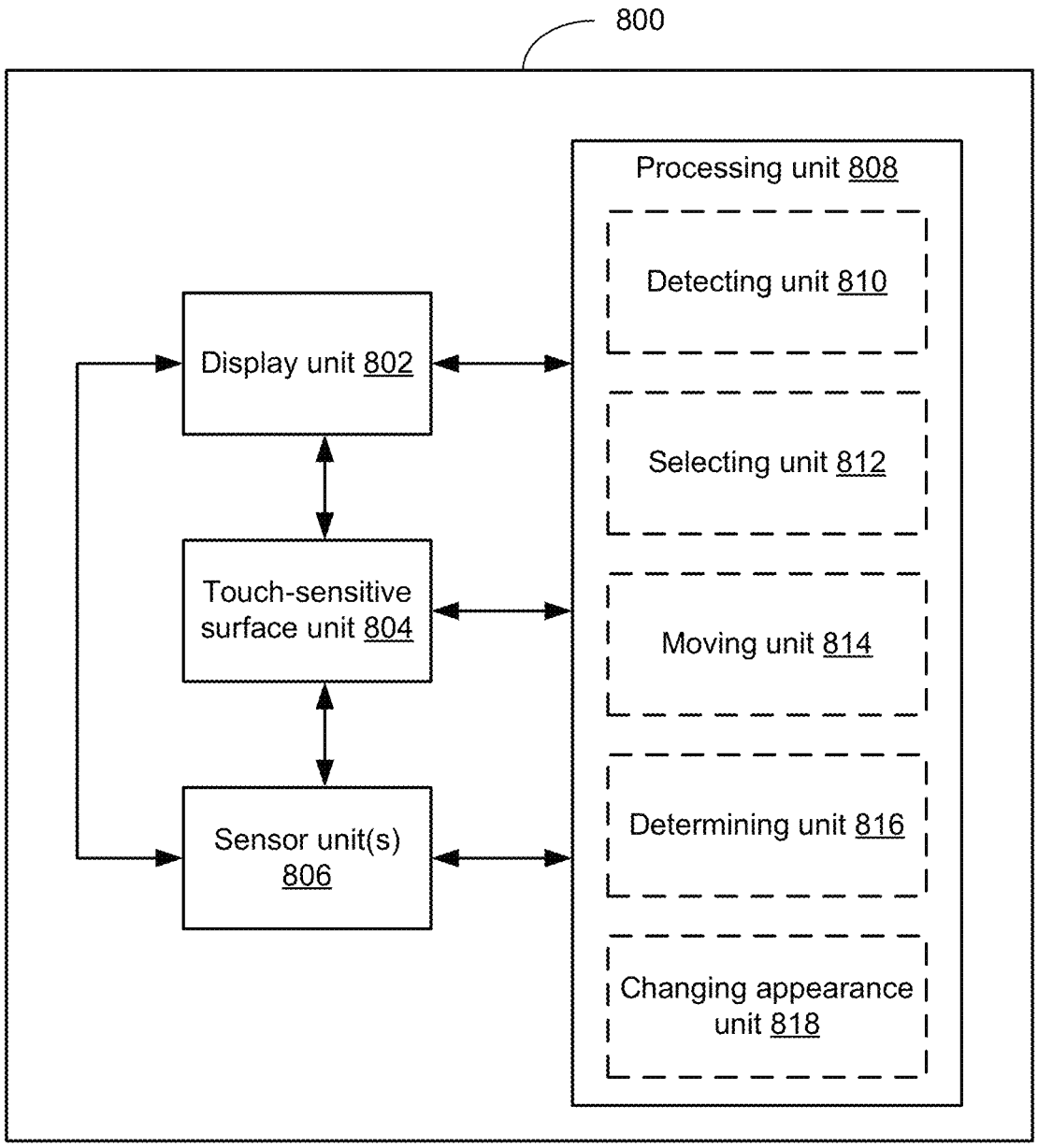

800
Processing unit 808
Detecting unit 810
Display unit 802
Selecting unit 812
Touch-sensitive surface unit 804
Moving unit 814
Determining unit 816
Sensor unit(s) 806
Changing appearance unit 818

Figure 8

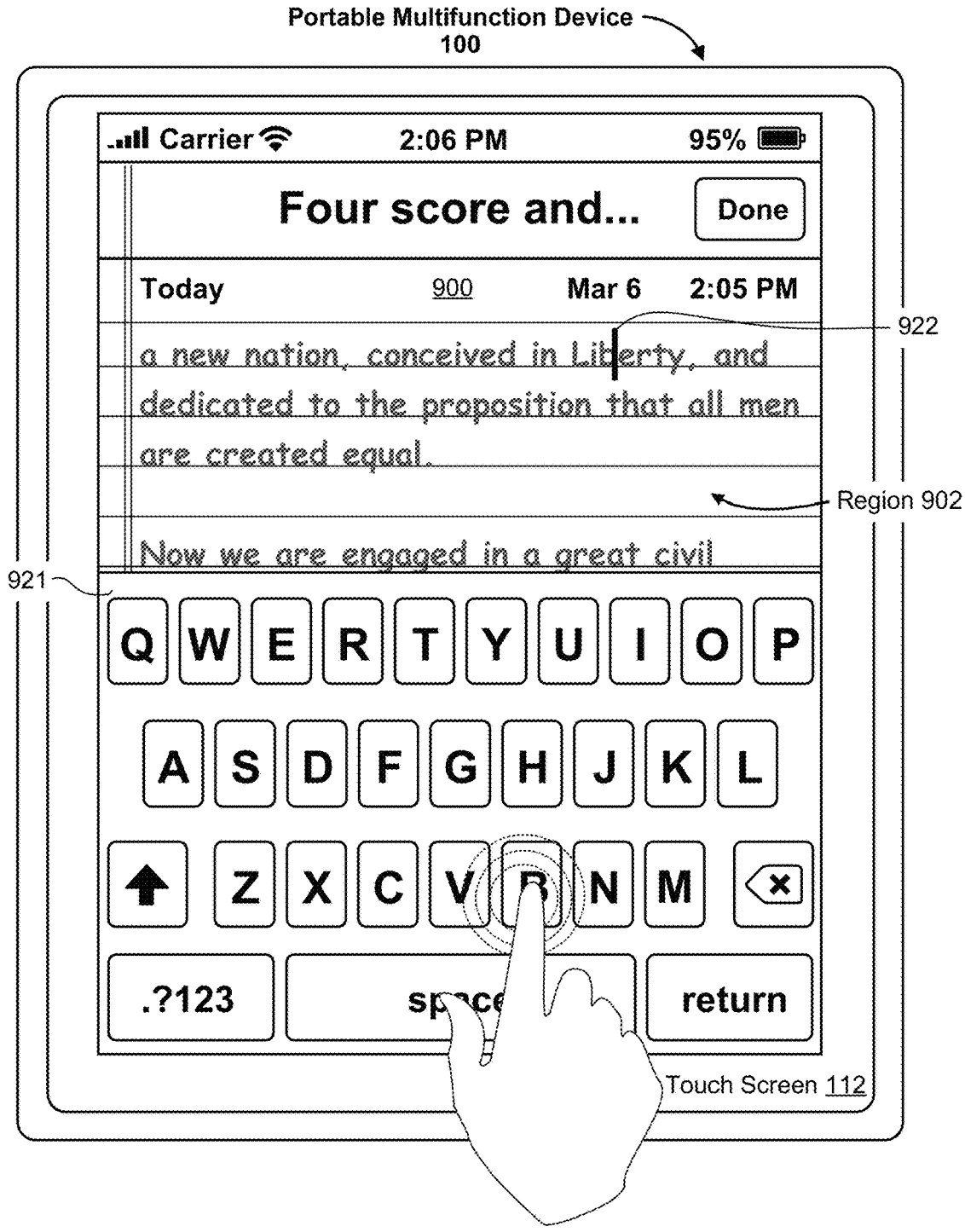

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
922
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Region 902
Now we are engaged in a great civil
921
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

Figure 9A

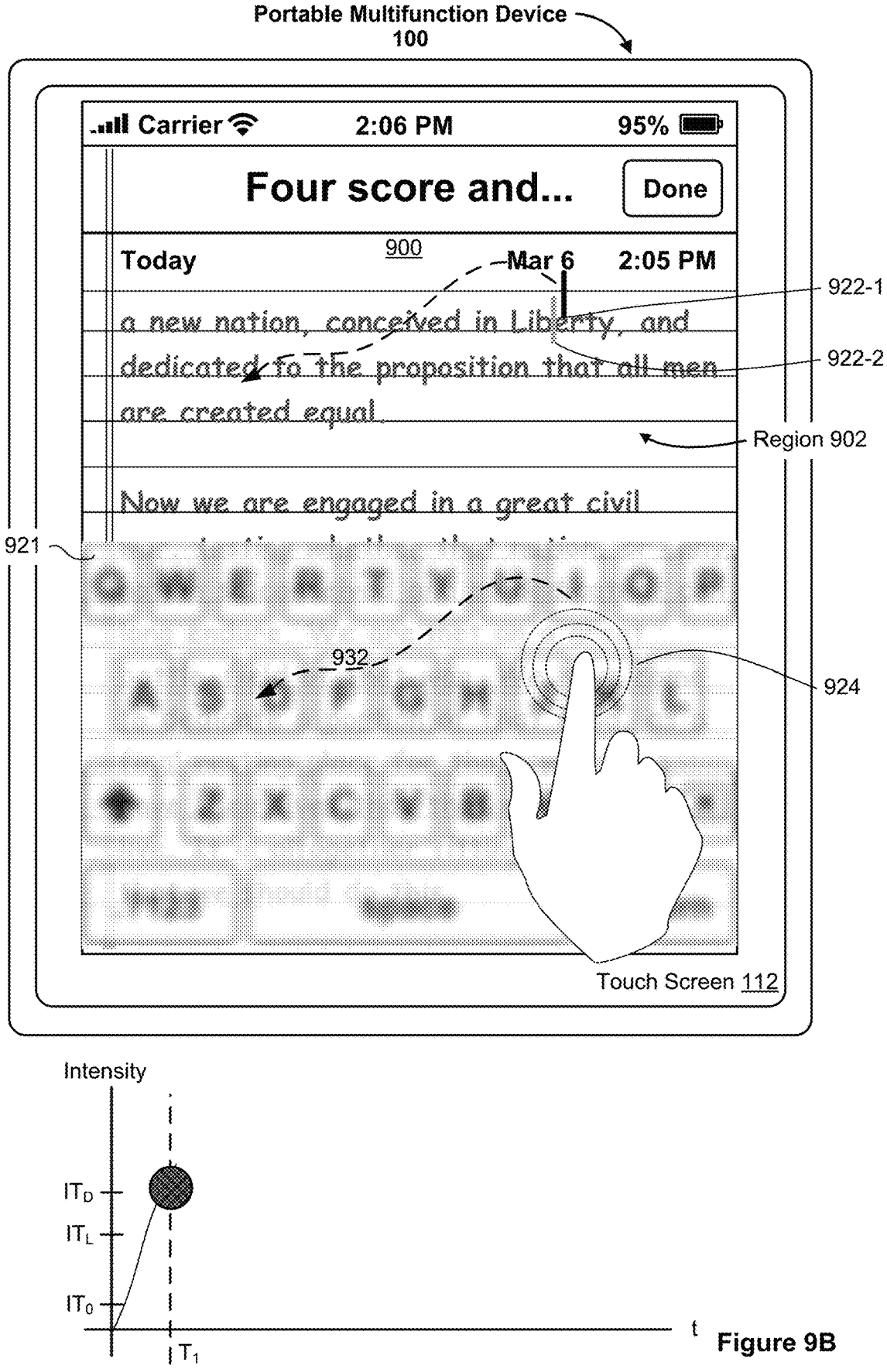
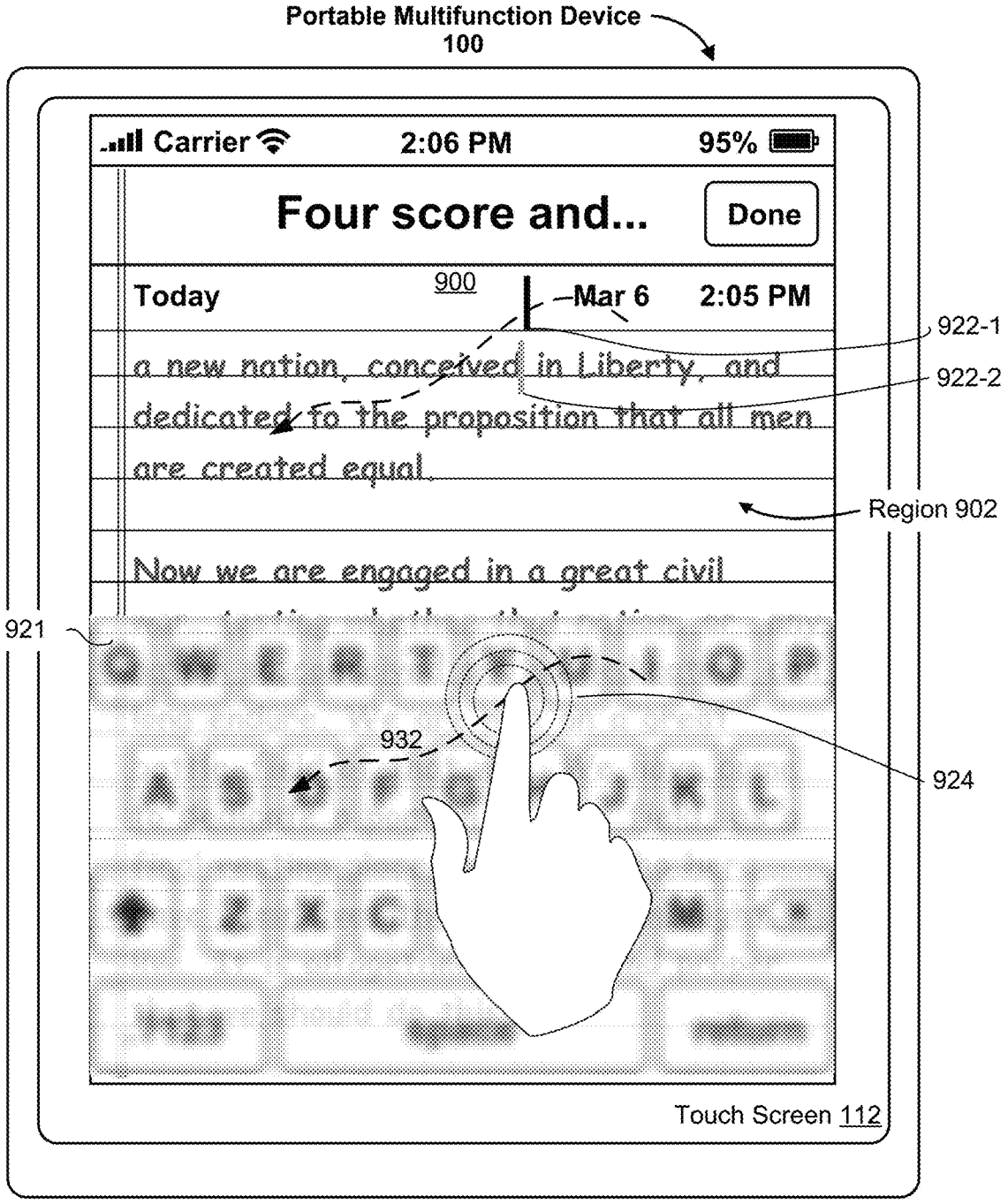

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal
Now we are engaged in a great civil
922-1
922-2
Region 902
921
932
924
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
T_1
t

Figure 9B


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal
Now we are engaged in a great civil
922-1
922-2
Region 902
921
932
924
Touch Screen 112

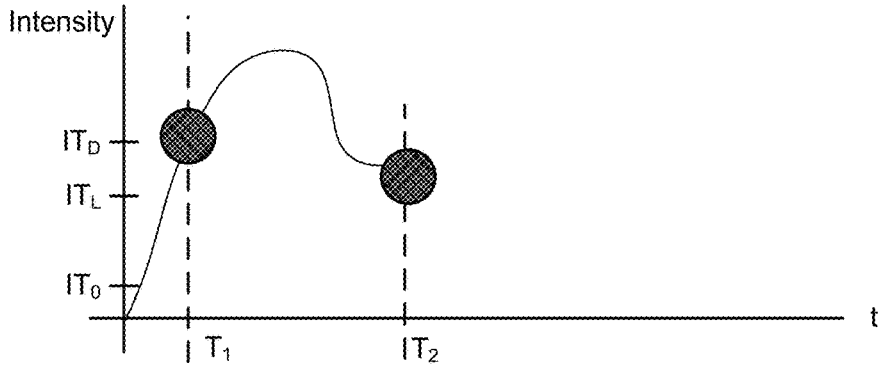

Intensity
IT_D
IT_L
IT_0
T_1
T_2
t

Figure 9C

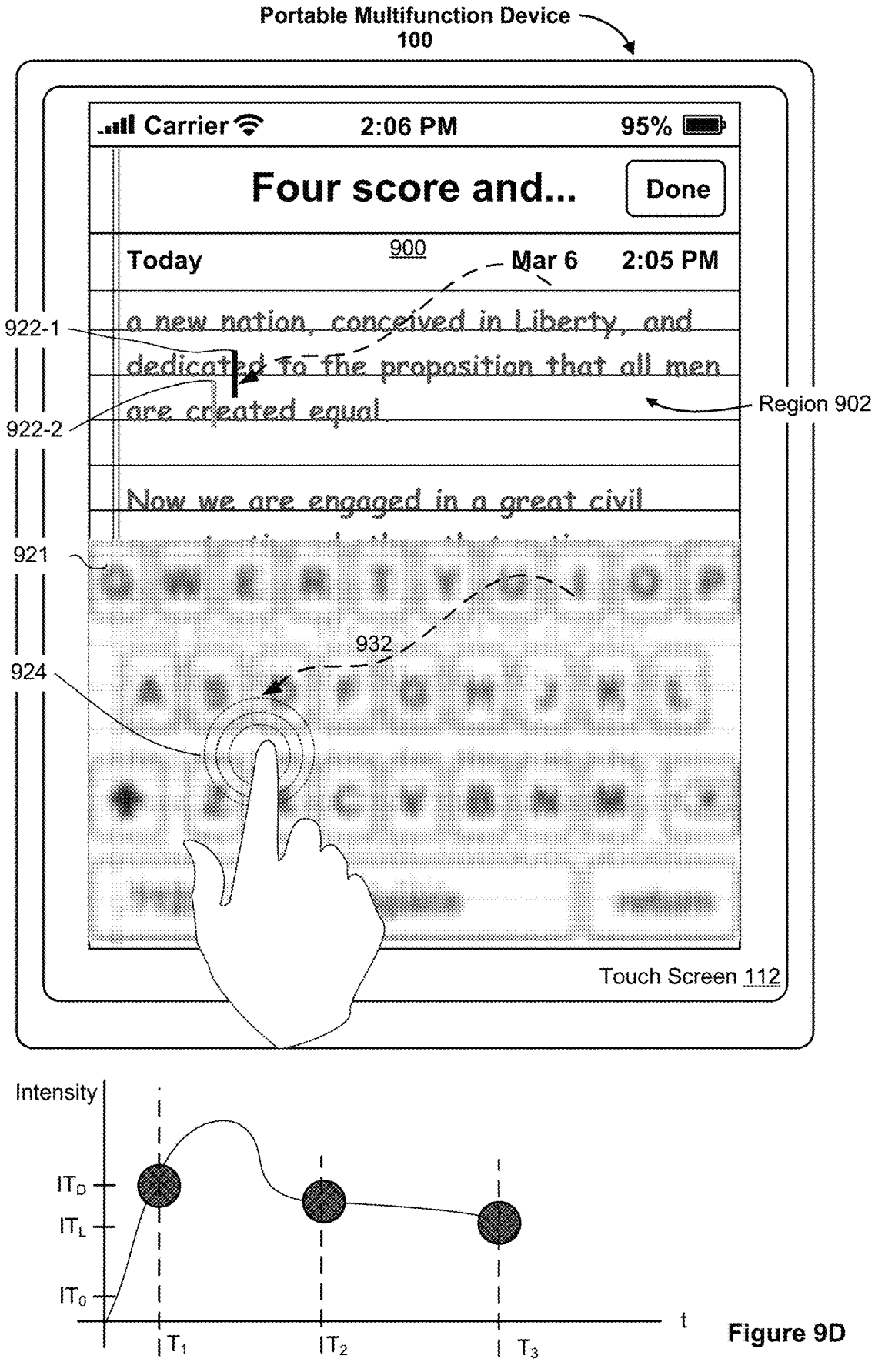
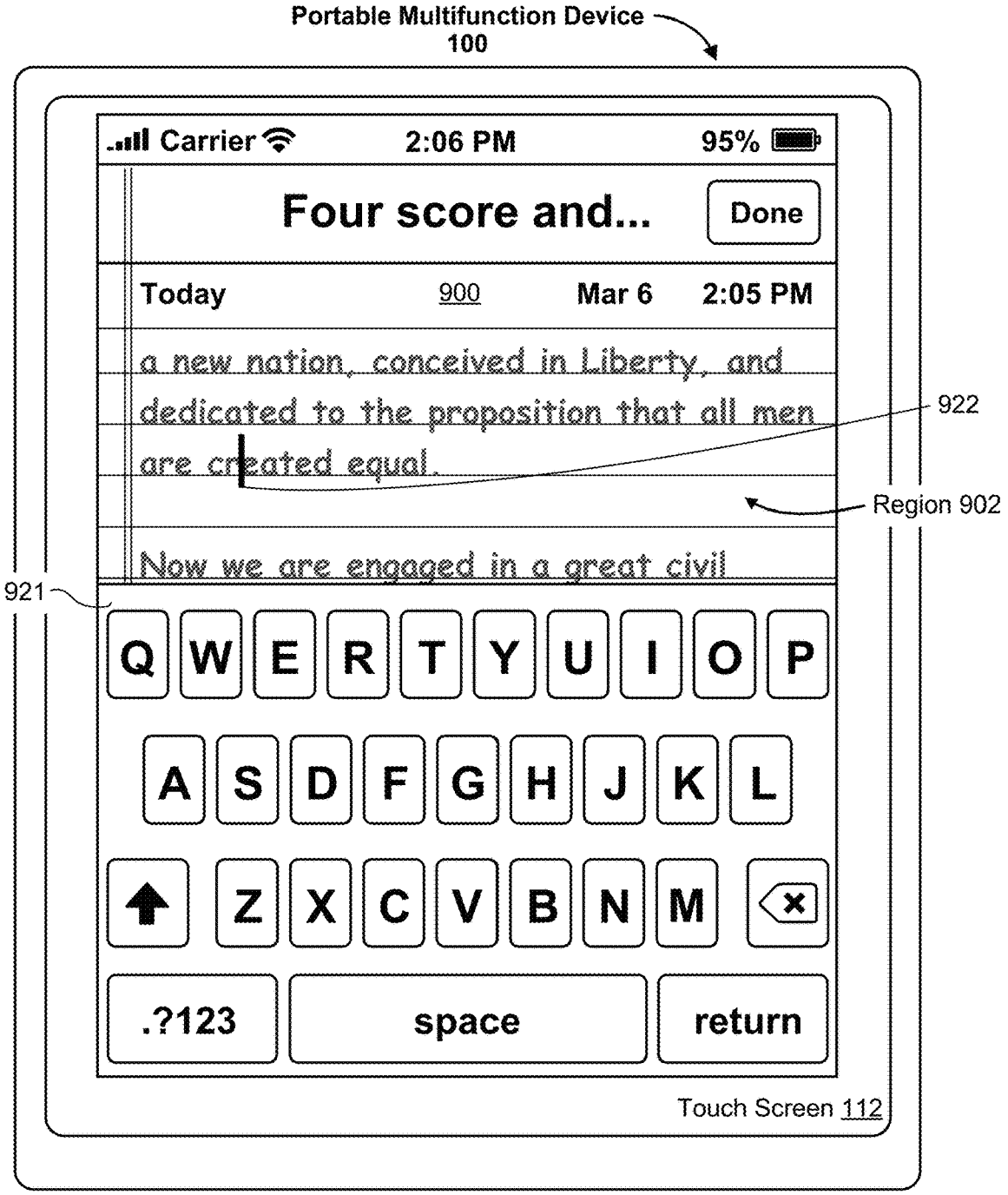

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal
Now we are engaged in a great civil
922-1
922-2
921
924
932
Region 902
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
t
T_1
T_2
T_3

Figure 9D


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
922
Region 902
921
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112

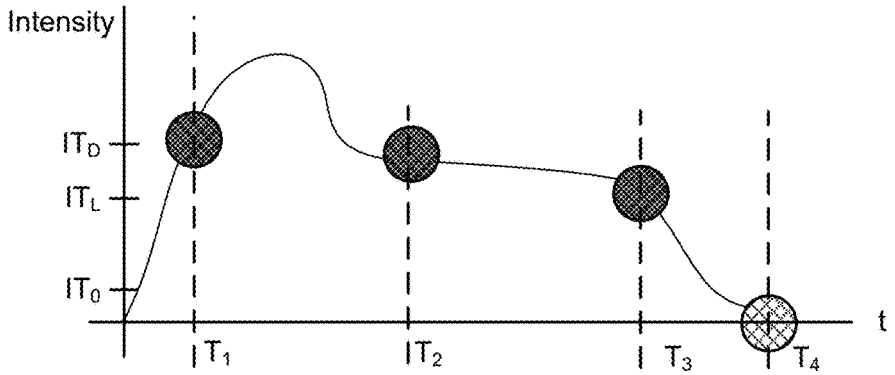
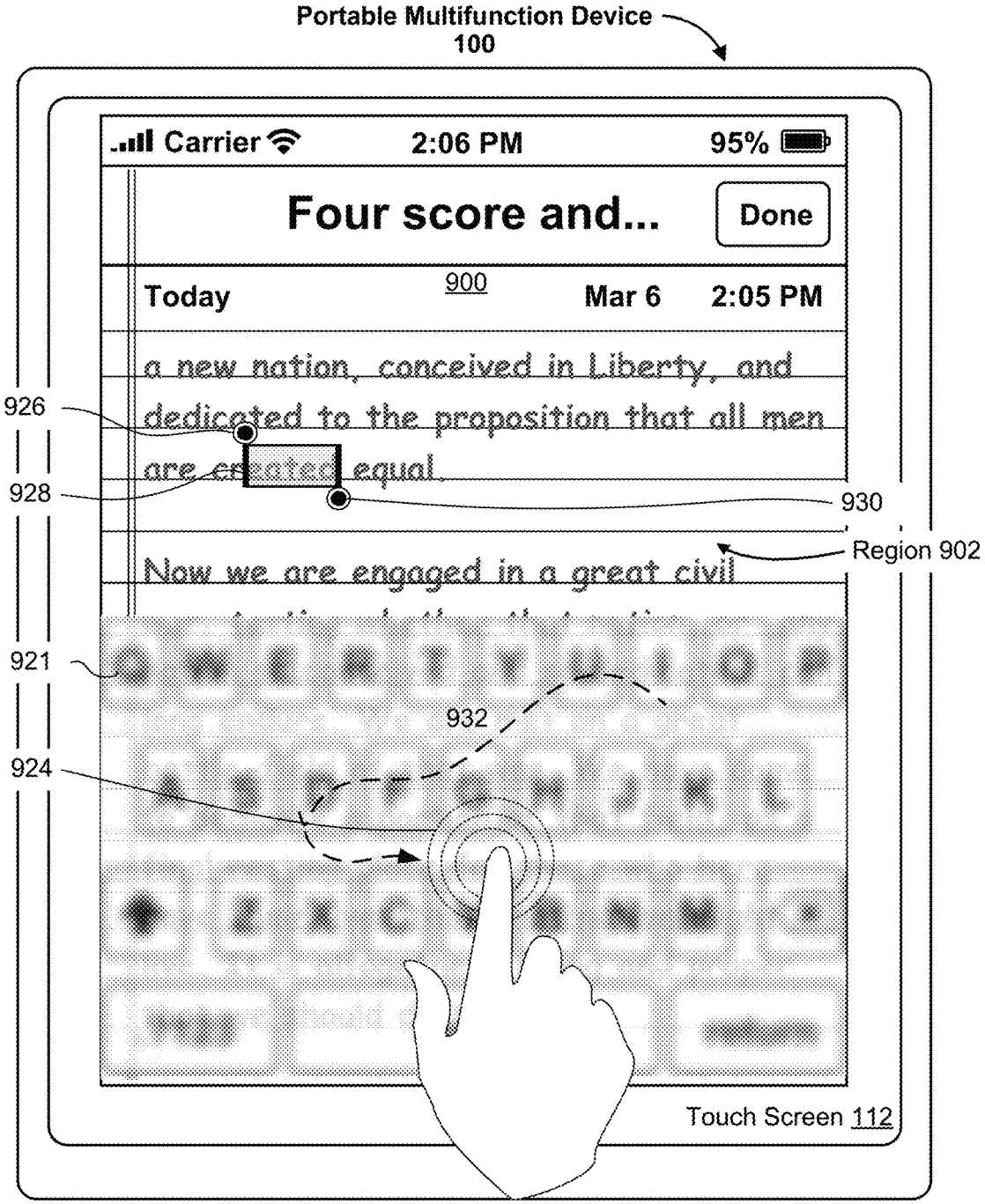

Intensity
IT_D
IT_L
IT_0
T_1
T_2
T_3
T_4
t

Figure 9E


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
900
Today
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
Now we are engaged in a great civil
926
928
930
Region 902
921
924
932
Touch Screen 112

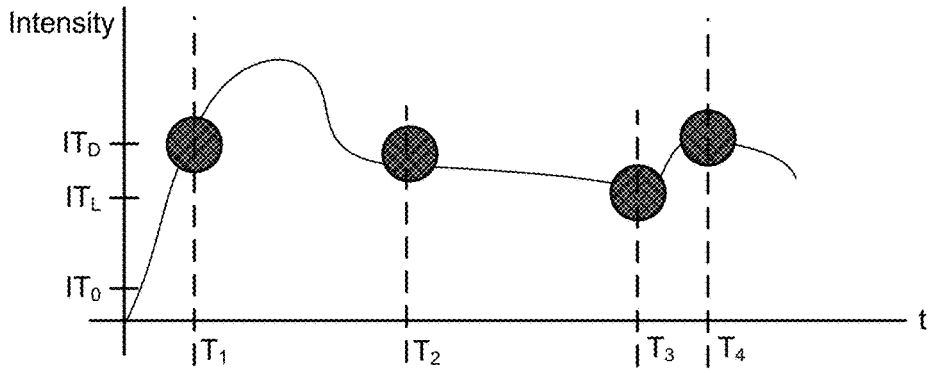

Intensity
IT_D
IT_L
IT_0
T_1
T_2
T_3
T_4
t

Figure 9F

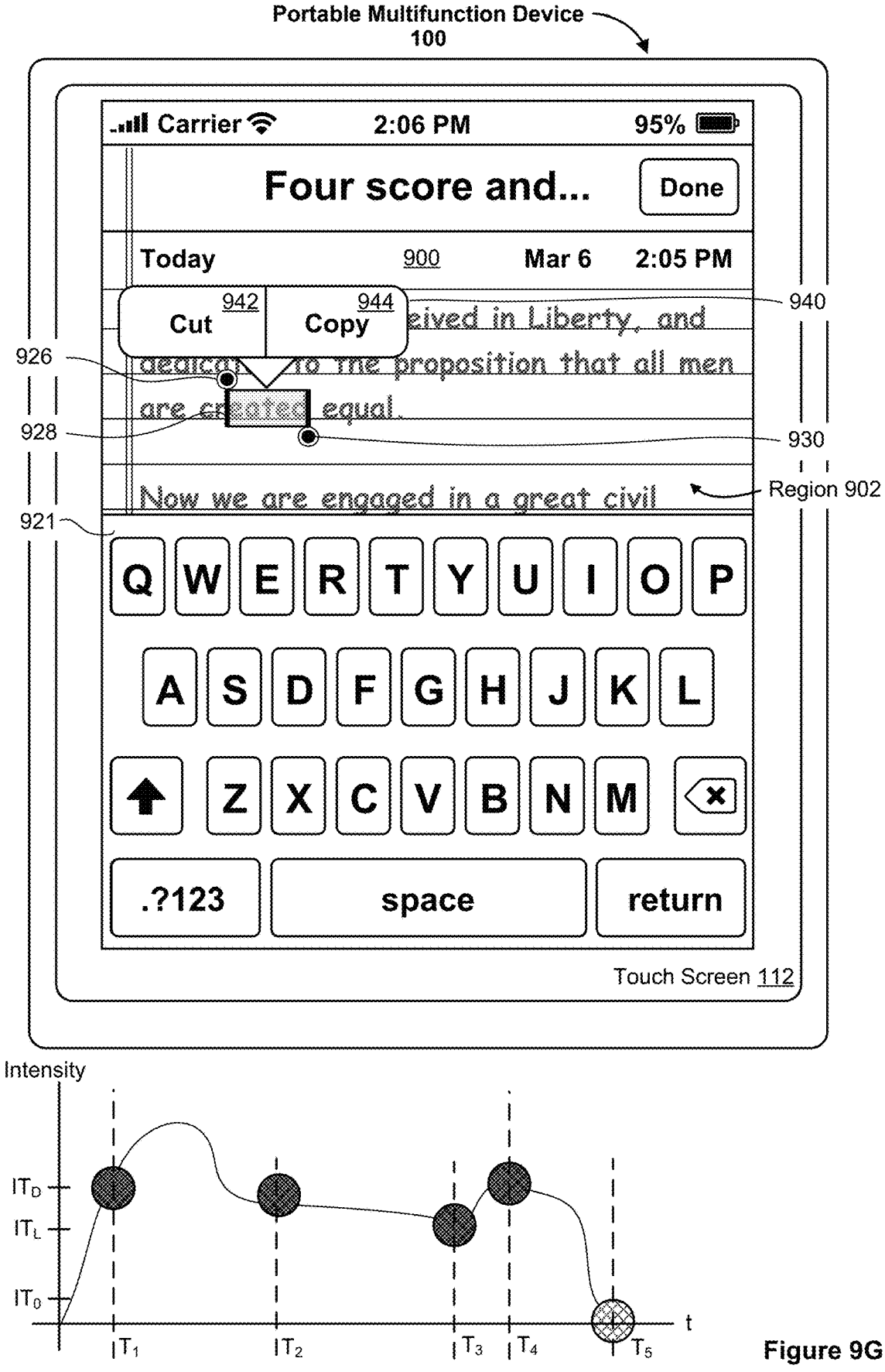

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
942
Cut
944
Copy
940
926
928
930
Region 902
921
Now we are engaged in a great civil
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
t
T_1
T_2
T_3
T_4
T_5

Figure 9G

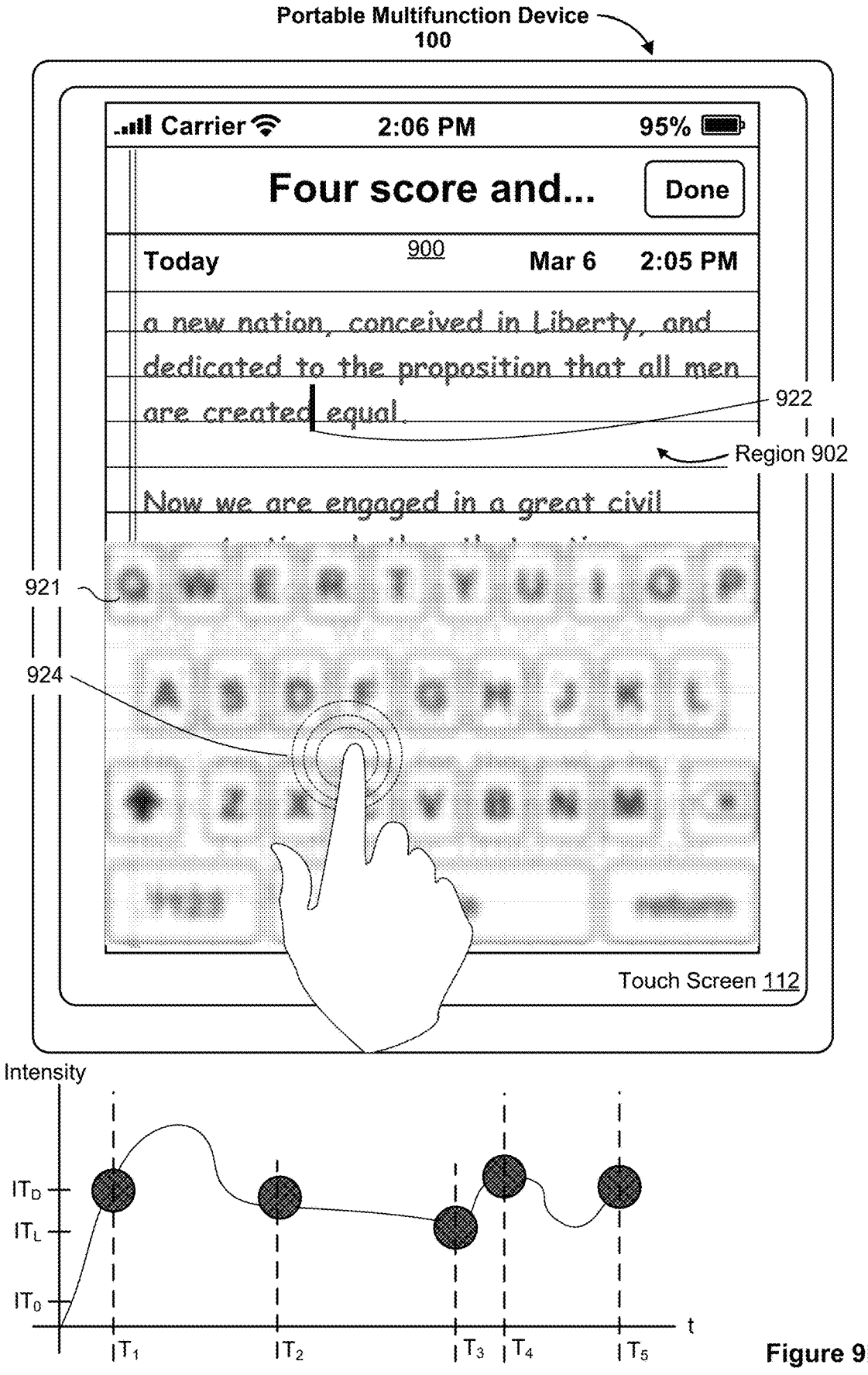

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal
922
Region 902
Now we are engaged in a great civil
921
924
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
t
T_1
T_2
T_3
T_4
T_5

Figure 9H

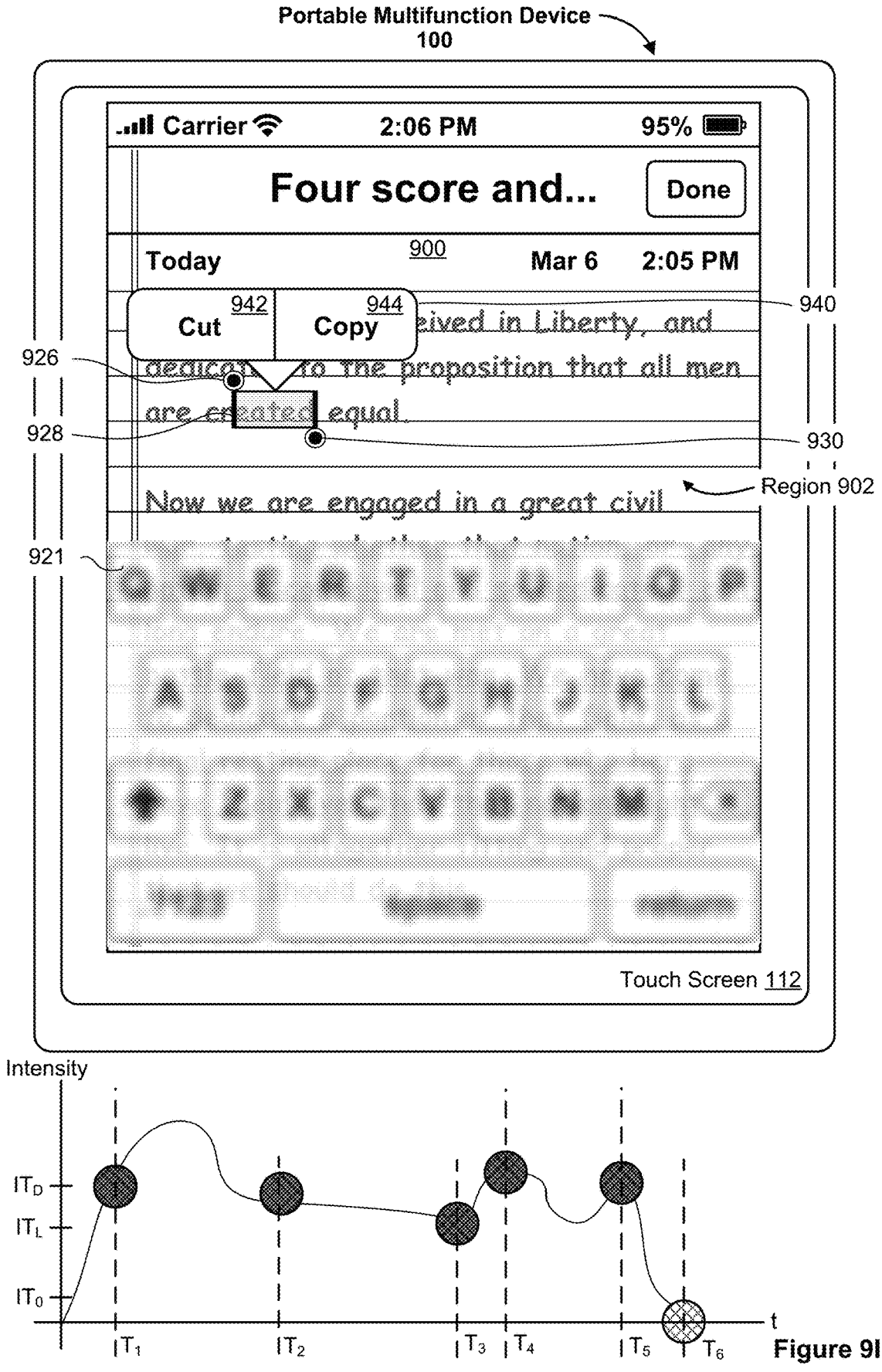
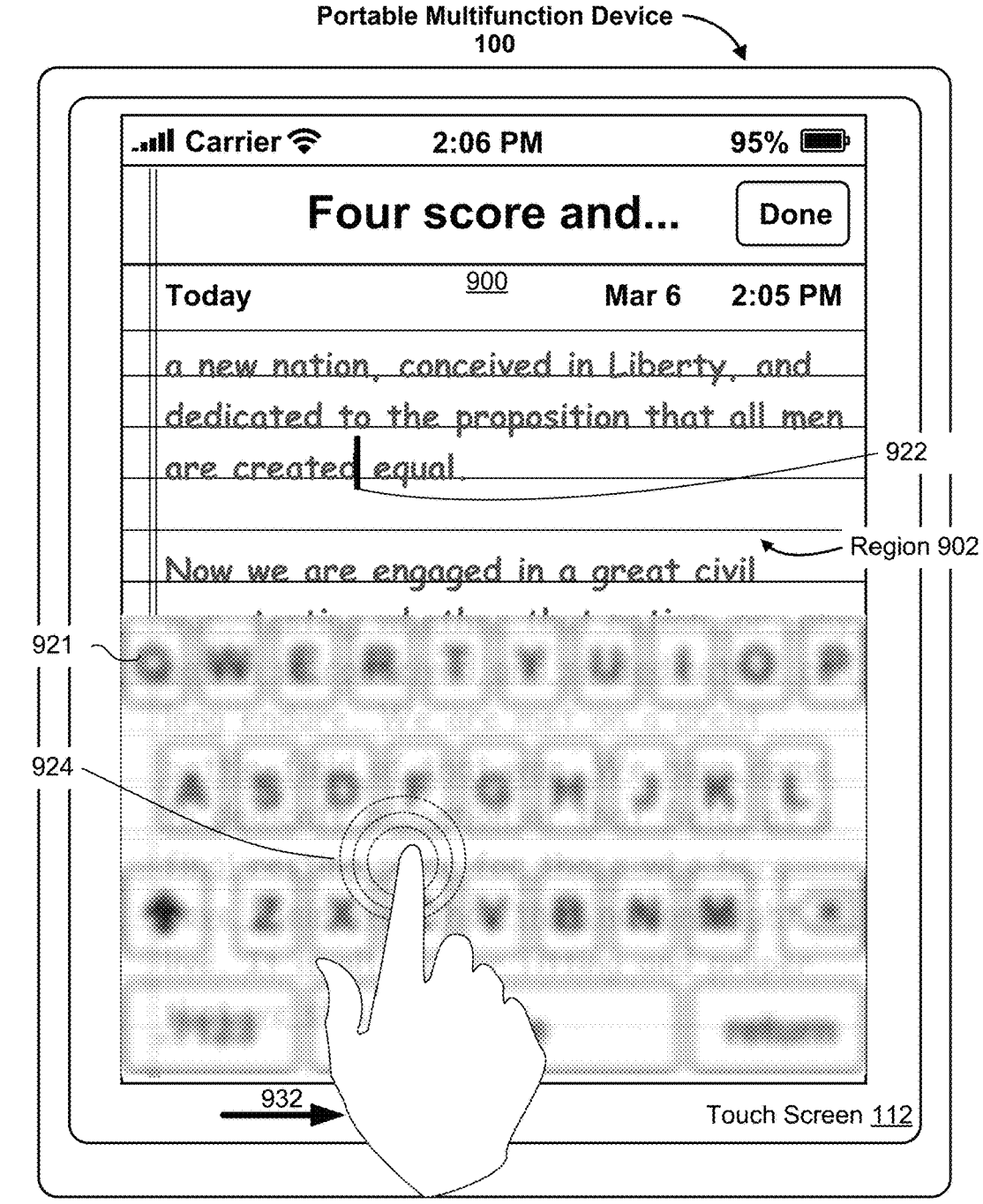

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
942
Cut
944
Copy
940
926
928
930
Region 902
921
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
T_1
T_2
T_3
T_4
T_5
T_6
t

Figure 9I


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal.
922
Region 902
Now we are engaged in a great civil
921
924
932
Touch Screen 112

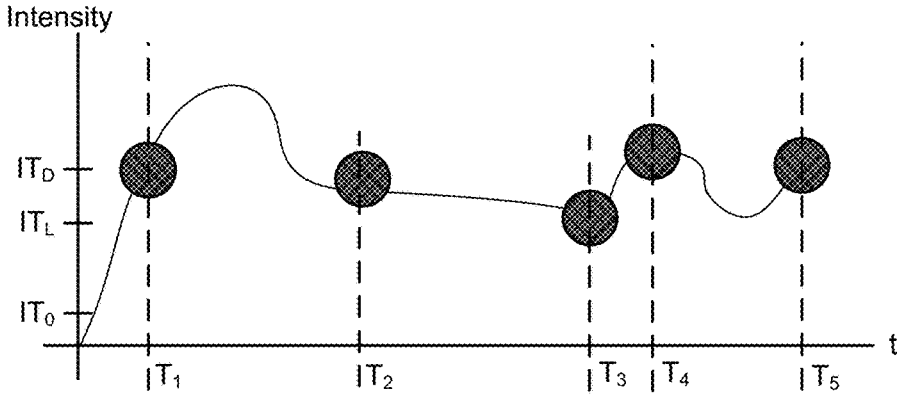

Intensity
IT_D
IT_L
IT_0
t
T_1
T_2
T_3
T_4
T_5

Figure 9J

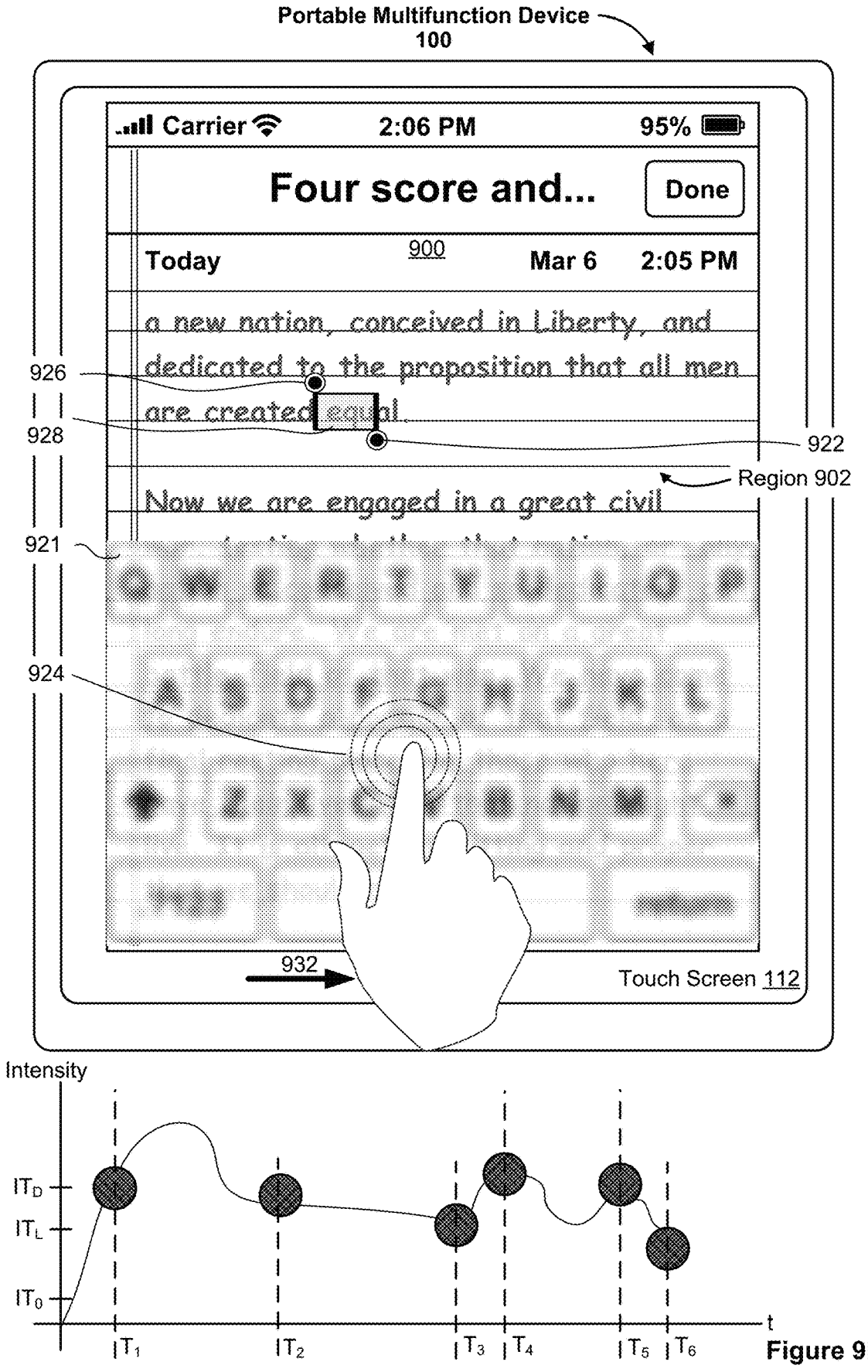

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal
Now we are engaged in a great civil
926
928
922
Region 902
921
924
932
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
T_1
T_2
T_3
T_4
T_5
T_6
t

Figure 9K

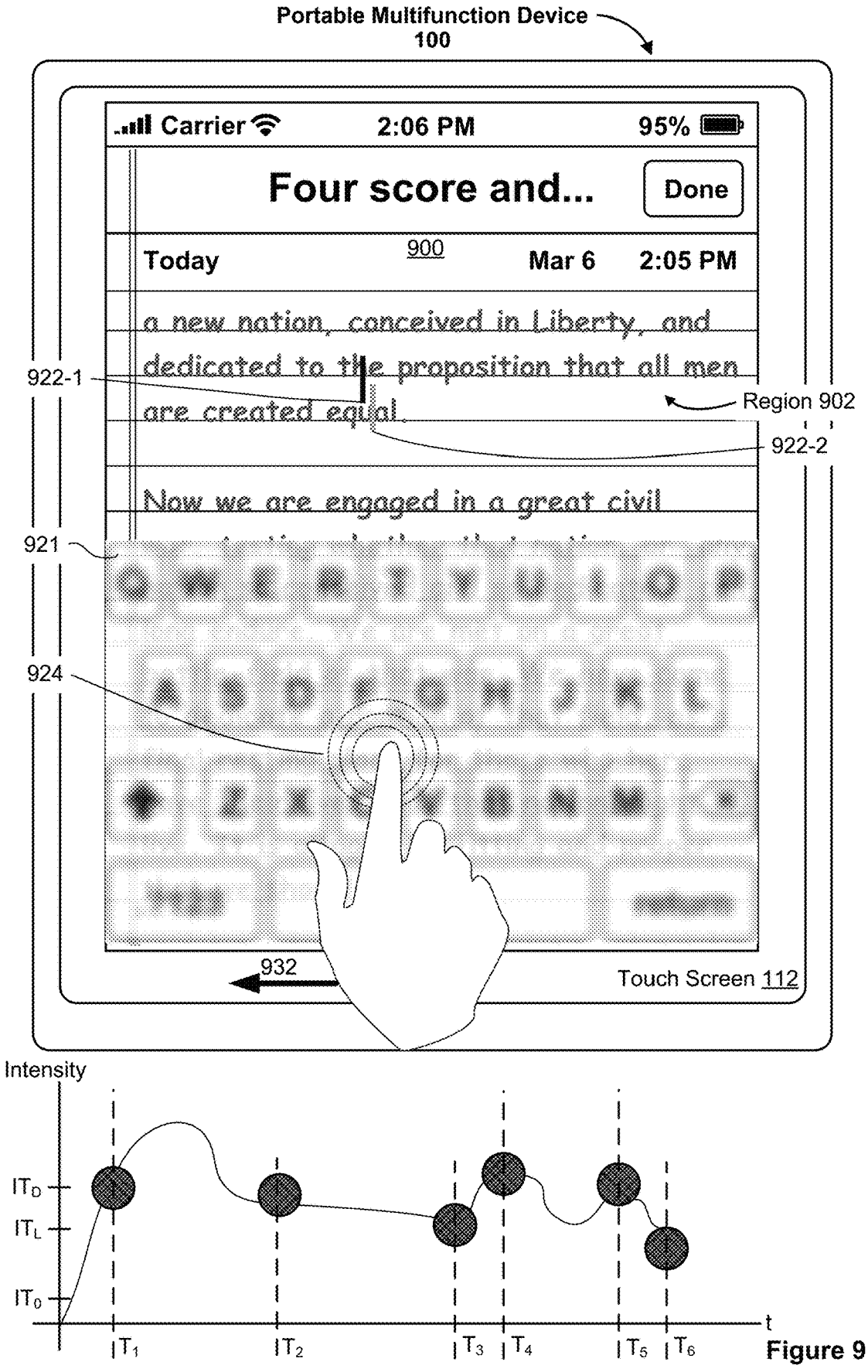
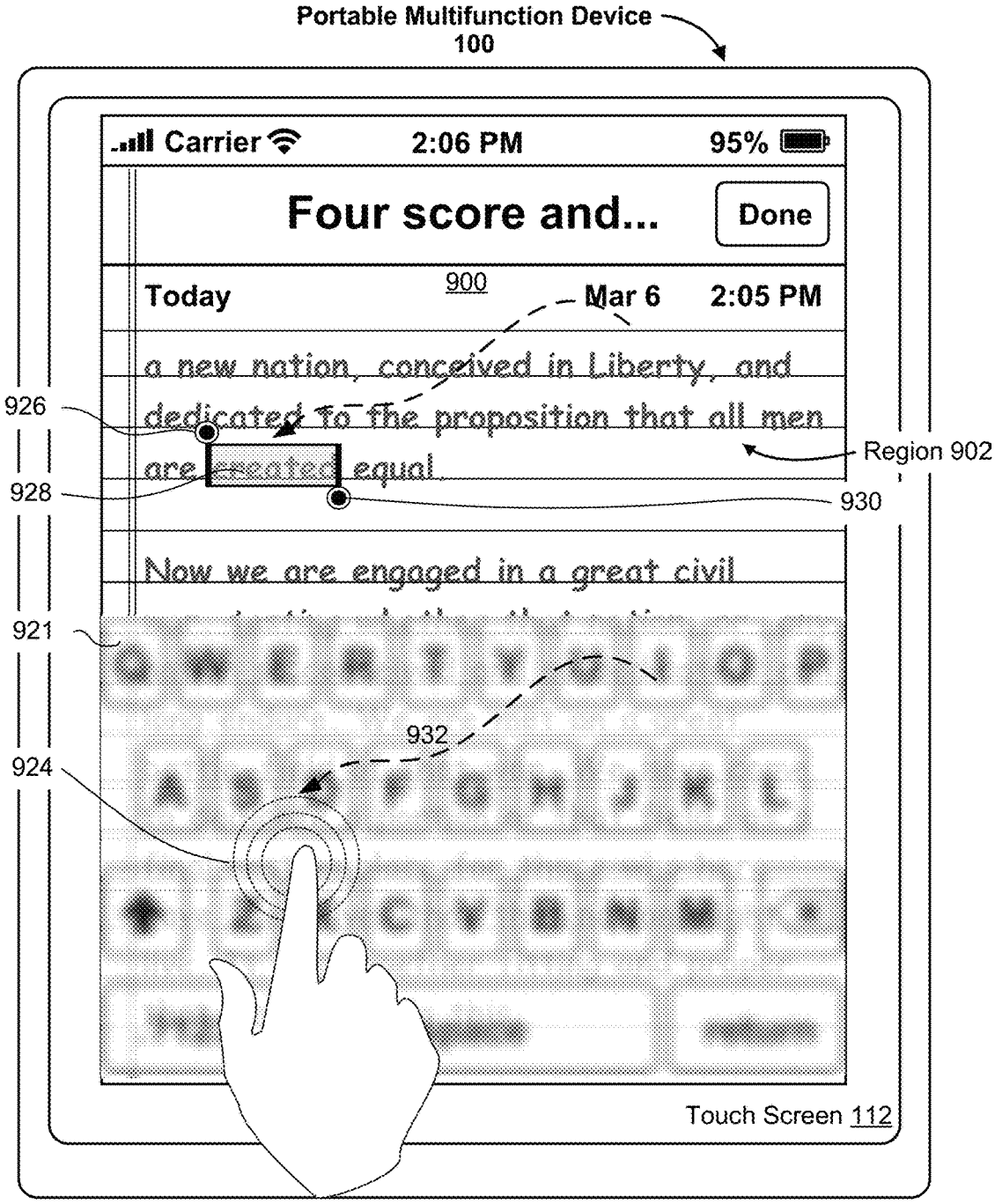

Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal
Region 902
922-1
922-2
Now we are engaged in a great civil
921
924
932
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
t
T_1
T_2
T_3
T_4
T_5
T_6

Figure 9L


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
Today
900
Mar 6
2:05 PM
a new nation, conceived in Liberty, and
dedicated to the proposition that all men
are created equal
Region 902
926
928
930
Now we are engaged in a great civil
921
932
924
Touch Screen 112

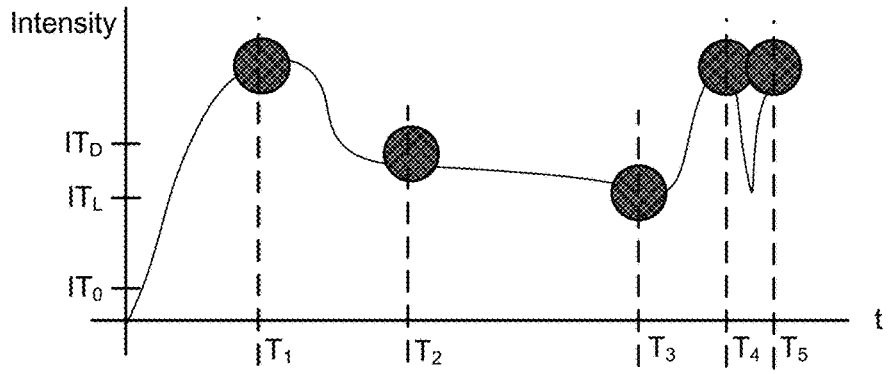
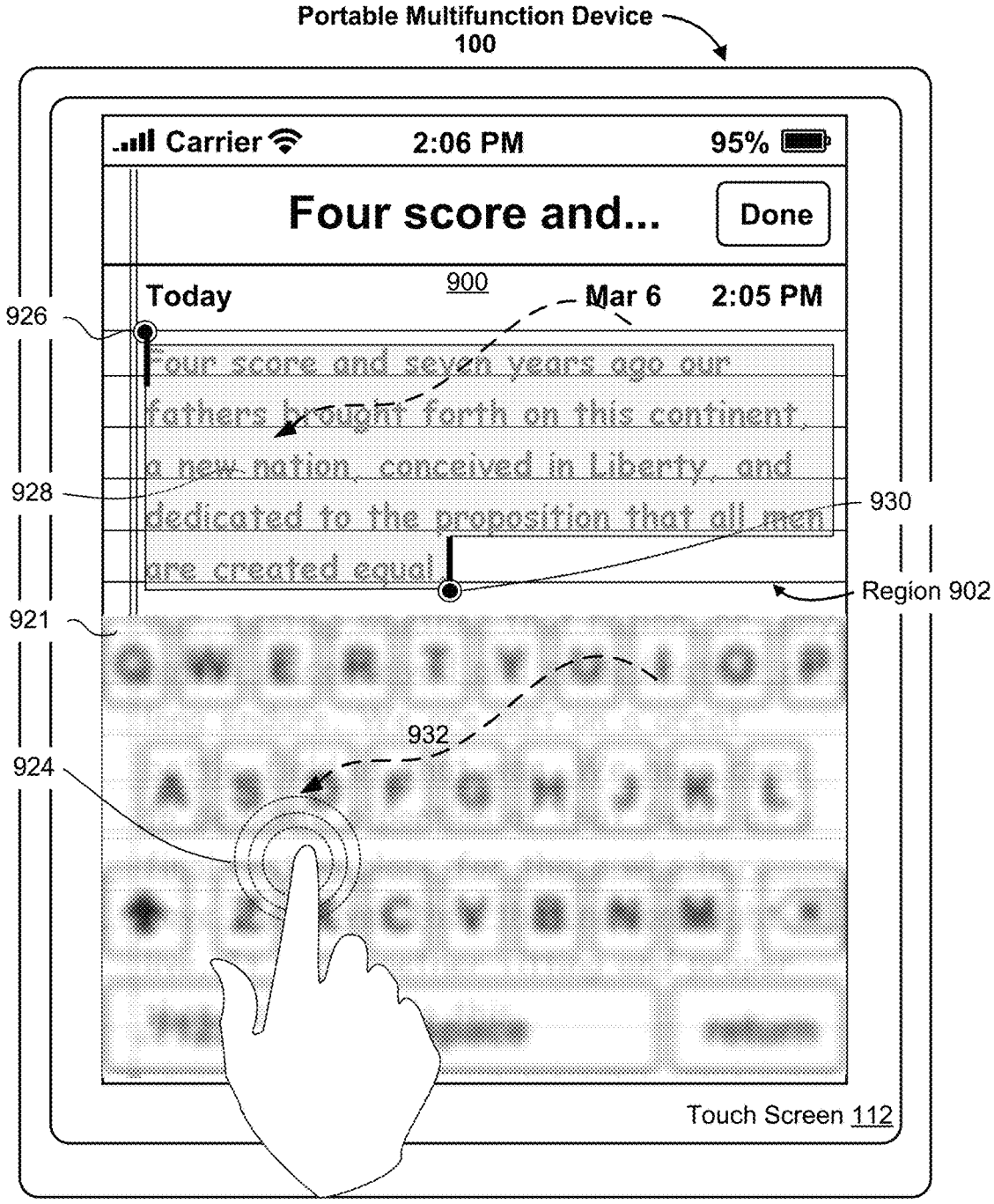

Intensity
IT_D
IT_L
IT_0
T_1
T_2
T_3
T_4
T_5
t

Figure 9M


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Four score and...
Done
900
Today
Mar 6
2:05 PM
926
928
930
Region 902
921
932
924
Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.
Touch Screen 112

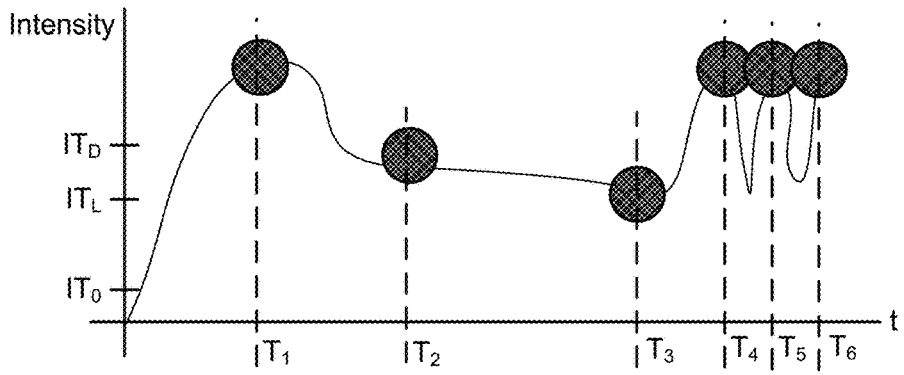

Intensity
IT_D
IT_L
IT_0
t
T_1
T_2
T_3
T_4
T_5
T_6

Figure 9N

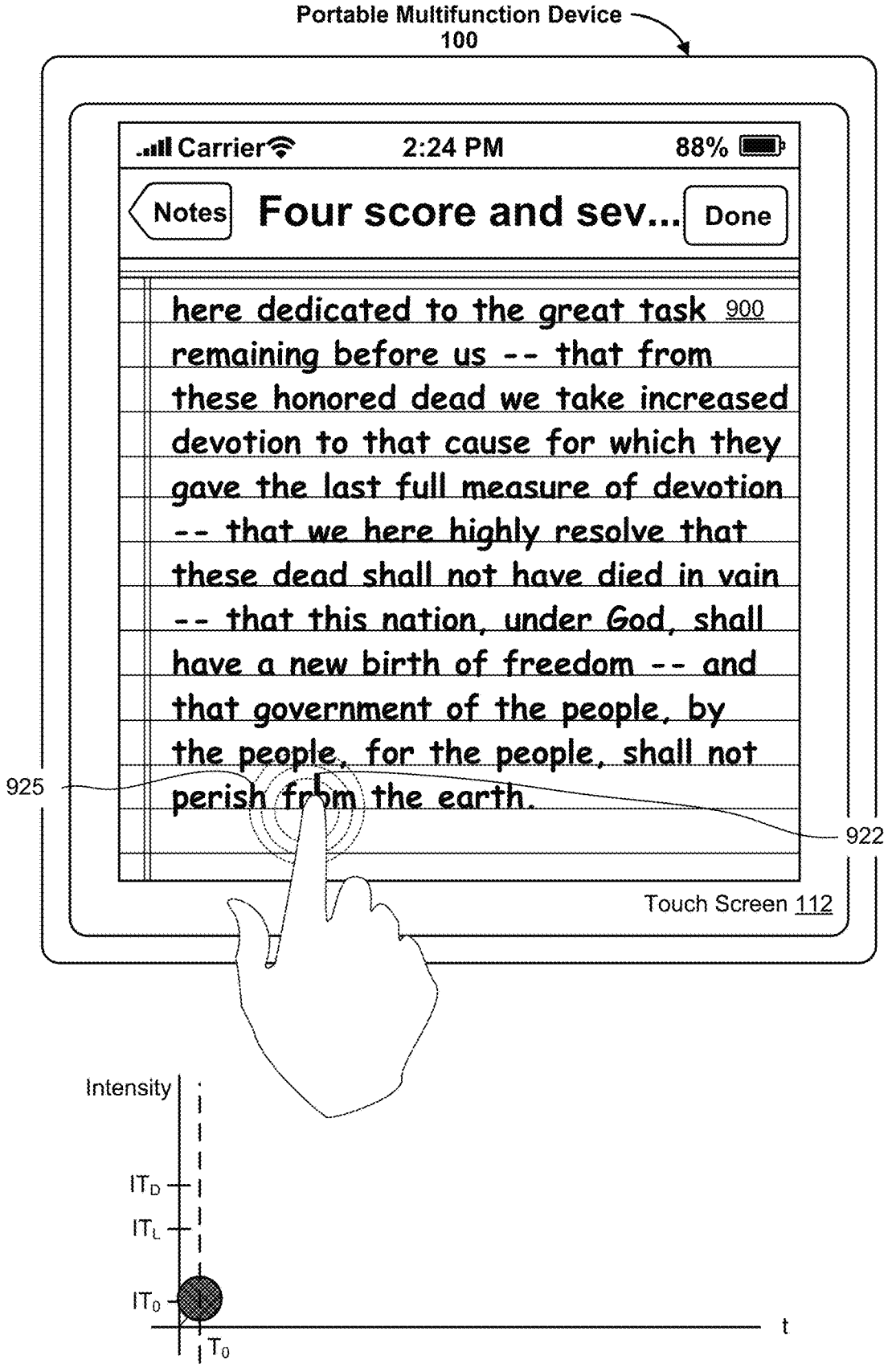

Portable Multifunction Device
100
Carrier
2:24 PM
88%
Notes
Four score and sev...
Done
here dedicated to the great task 900
remaining before us -- that from
these honored dead we take increased
devotion to that cause for which they
gave the last full measure of devotion
-- that we here highly resolve that
these dead shall not have died in vain
-- that this nation, under God, shall
have a new birth of freedom -- and
that government of the people, by
the people, for the people, shall not
perish from the earth.
925
922
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
T_0
t

Figure 9O

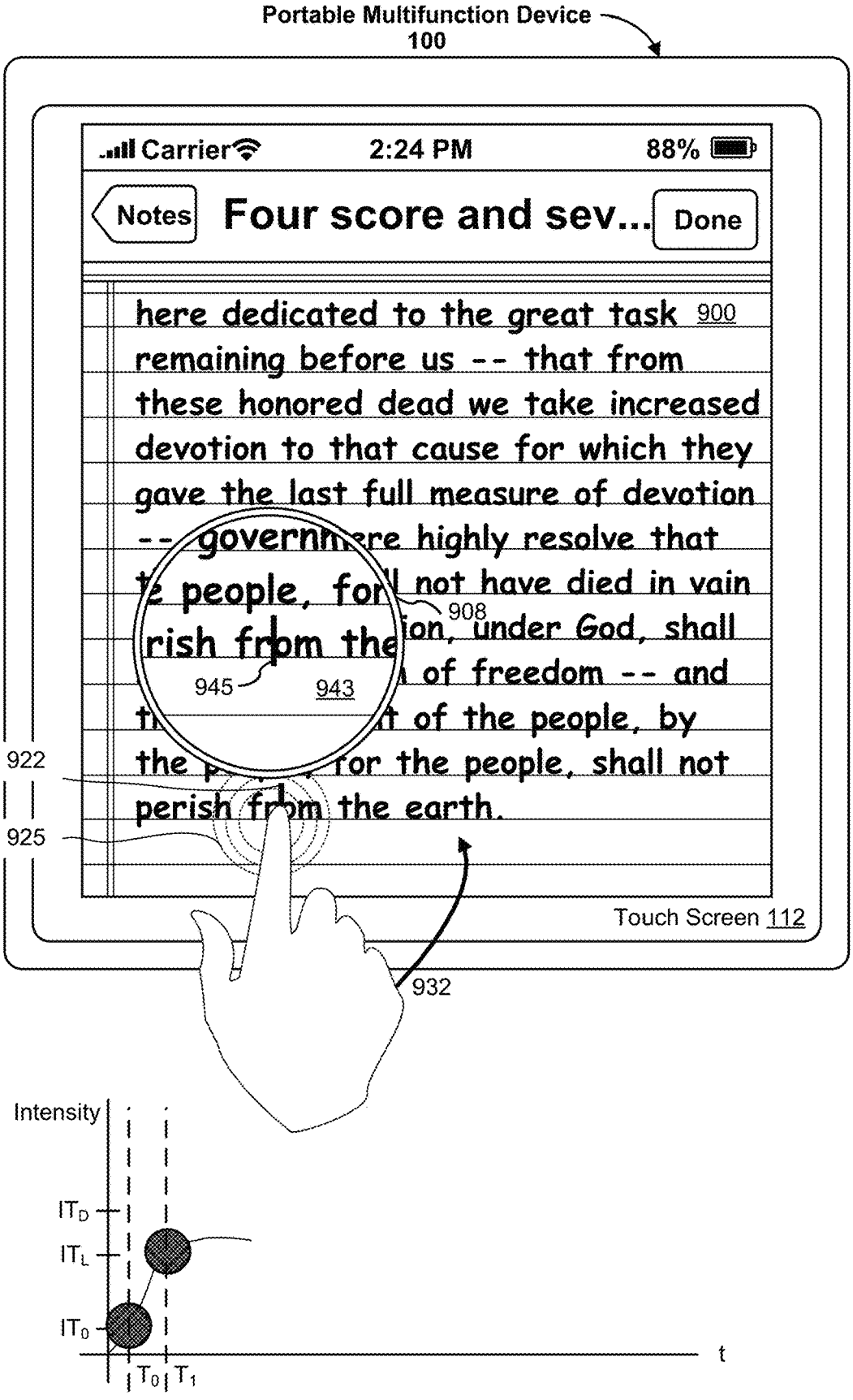

Portable Multifunction Device
100
Carrier
2:24 PM
88%
Notes
Four score and sev...
Done
here dedicated to the great task 900
remaining before us -- that from
these honored dead we take increased
devotion to that cause for which they
gave the last full measure of devotion
-- governm ere highly resolve that
people, for l not have died in vain
rish from the ion, under God, shall
of freedom -- and
t of the people, by
for the people, shall not
perish from the earth.
908
945
943
922
925
932
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
T_0
T_1
t

Figure 9P

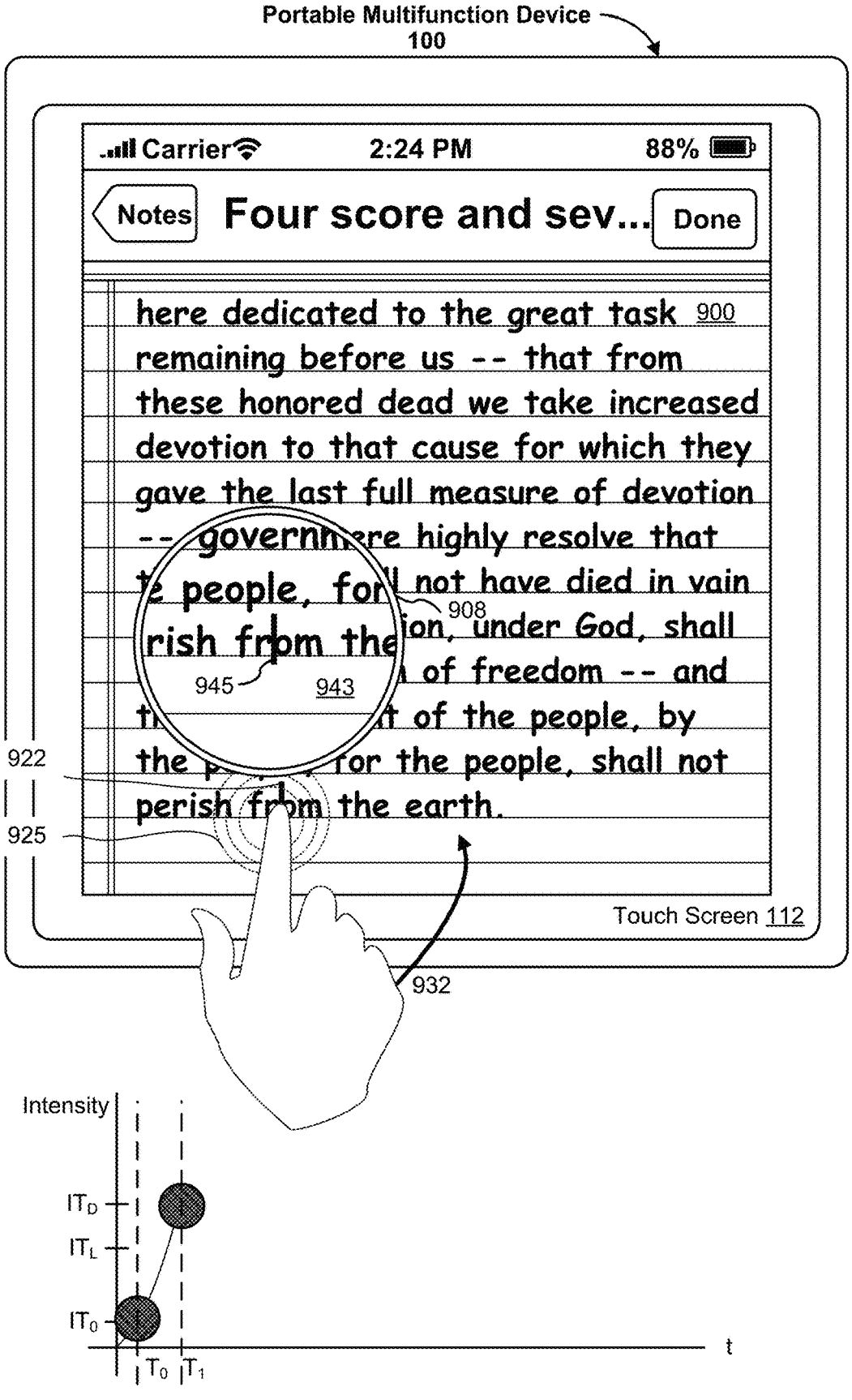
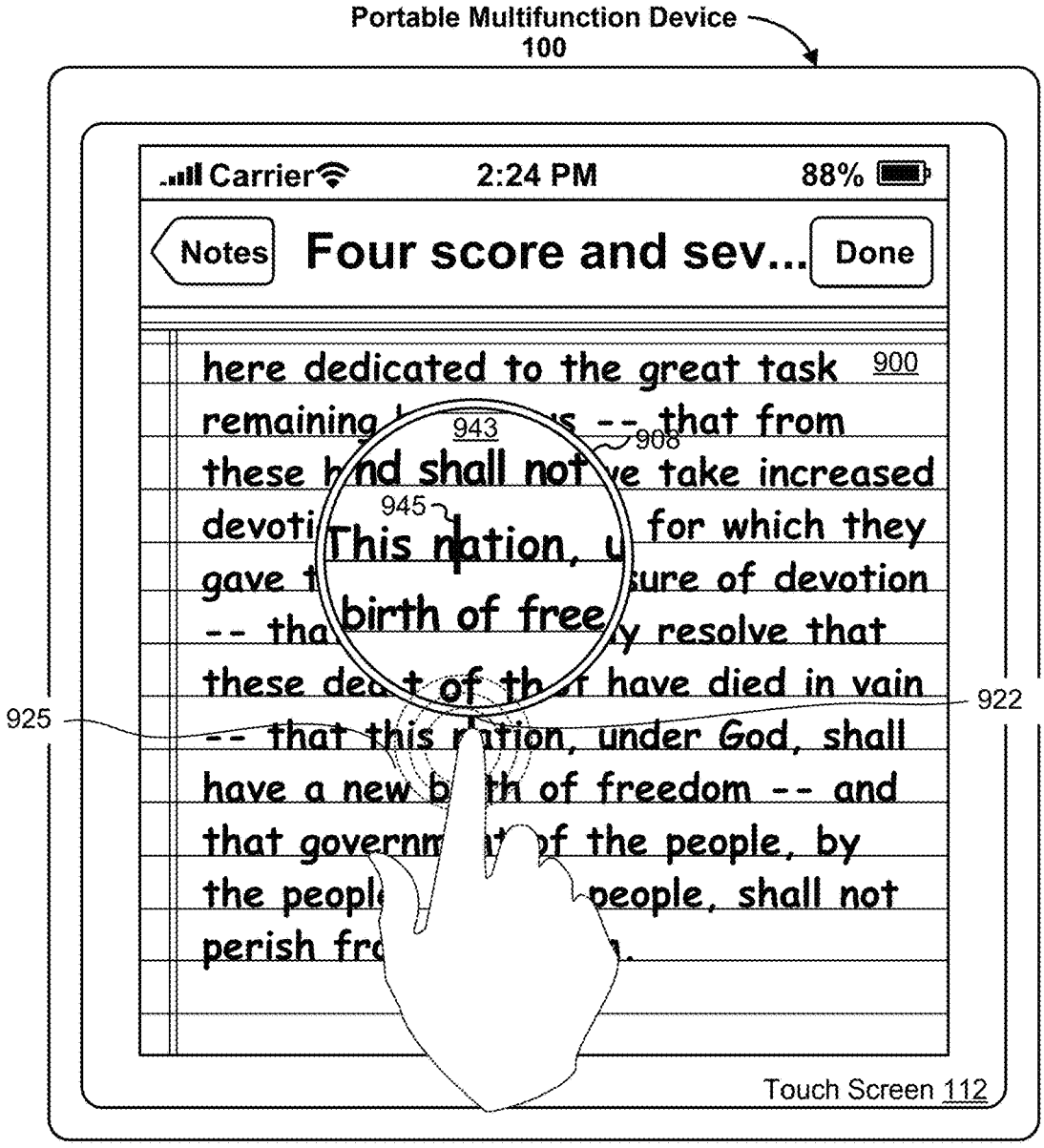

Portable Multifunction Device
100
Carrier
2:24 PM
88%
Notes
Four score and sev...
Done
here dedicated to the great task 900
remaining before us -- that from
these honored dead we take increased
devotion to that cause for which they
gave the last full measure of devotion
-- governm ere highly resolve that
e people, for not have died in vain
908
rish from the ion, under God, shall
945
943
of freedom -- and
t of the people, by
the for the people, shall not
perish from the earth.
922
925
Touch Screen 112
932
Intensity
IT_D
IT_L
IT_0
T_0
T_1
t

Figure 9Q


Portable Multifunction Device
100
Carrier
2:24 PM
88%
Notes
Four score and sev...
Done
here dedicated to the great task
900
943
908
945
925
922
Touch Screen 112

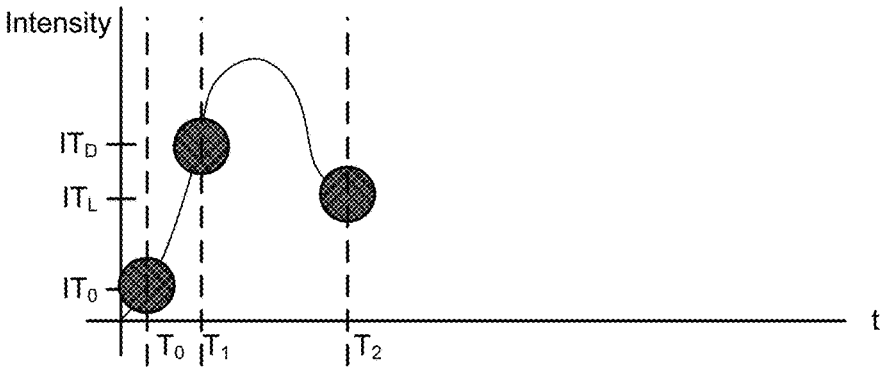

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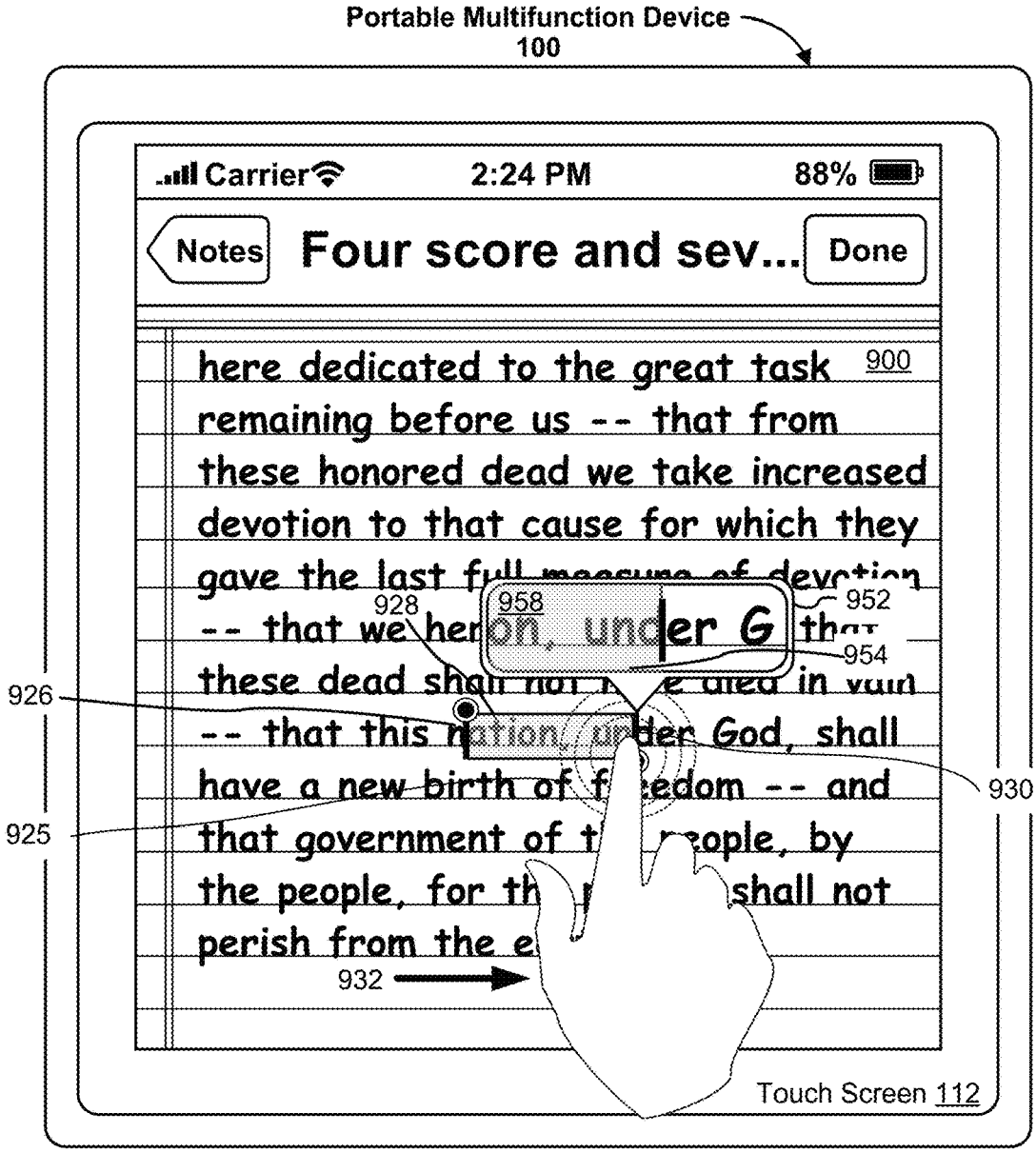
Figure 9R


Portable Multifunction Device
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Notes
Four score and sev...
Done
here dedicated to the great task
900
remaining before us -- that from
these honored dead we take increased
devotion to that cause for which they
gave the last full measure of devotion
-- that we here
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these dead shall not have died in vain
-- that this nation, under God, shall
have a new birth of freedom -- and
that government of the people, by
the people, for the shall not
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Touch Screen 112

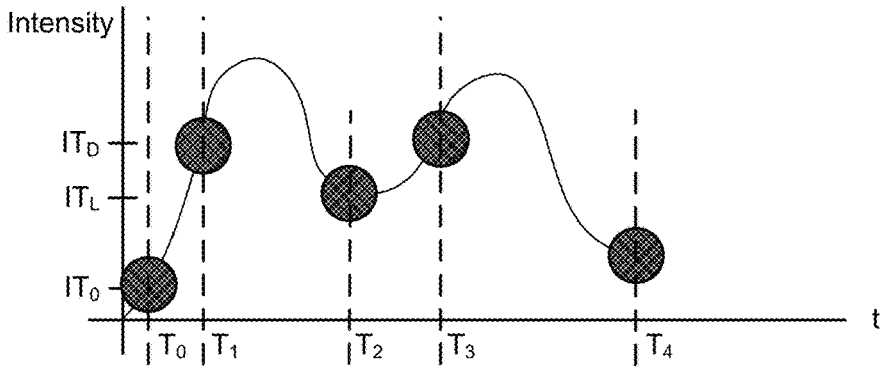
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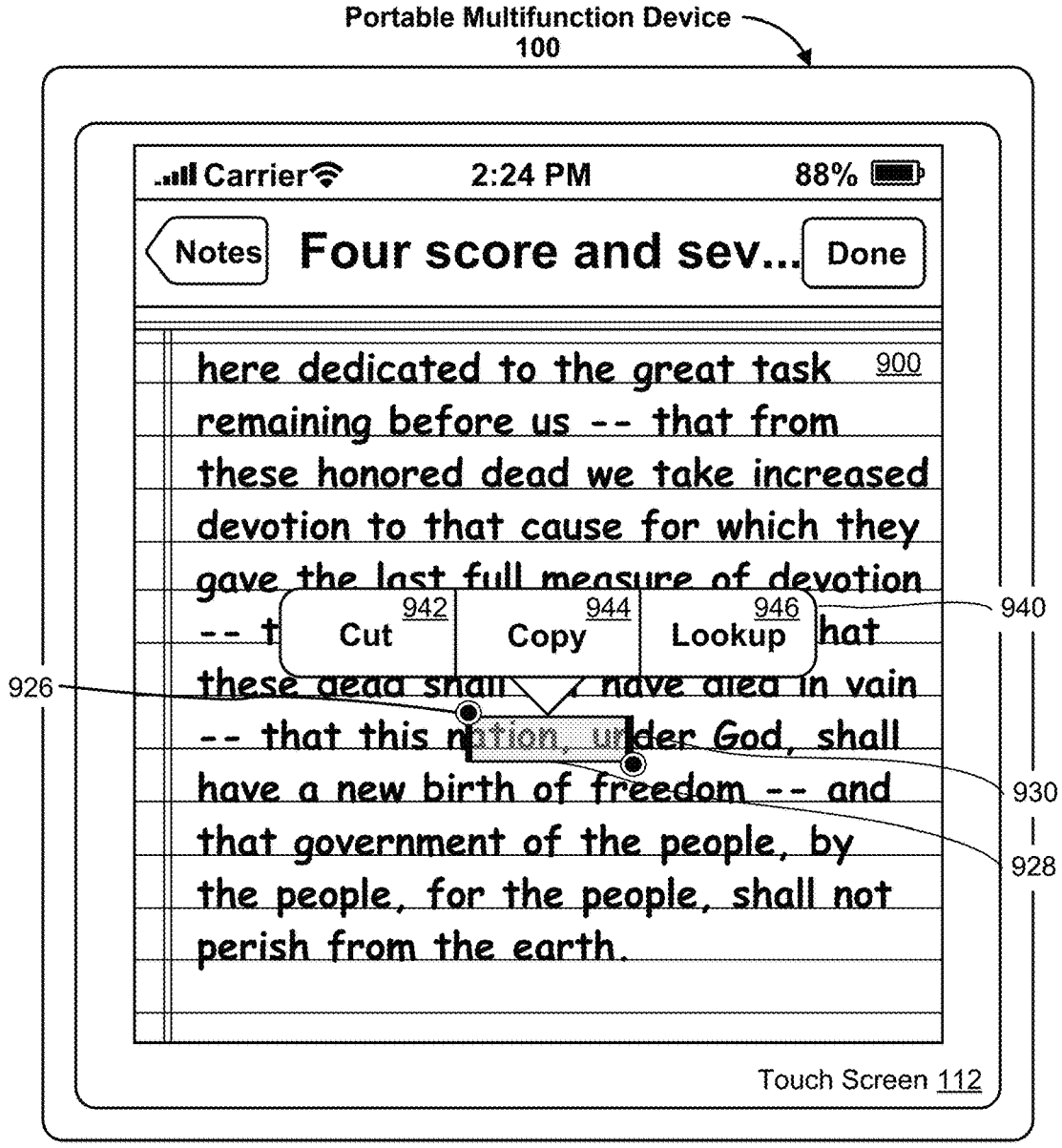
Figure 9S


Portable Multifunction Device
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Notes
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here dedicated to the great task
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have died in vain
-- that this nation, under God, shall
have a new birth of freedom -- and
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the people, for the people, shall not
perish from the earth.
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Touch Screen 112

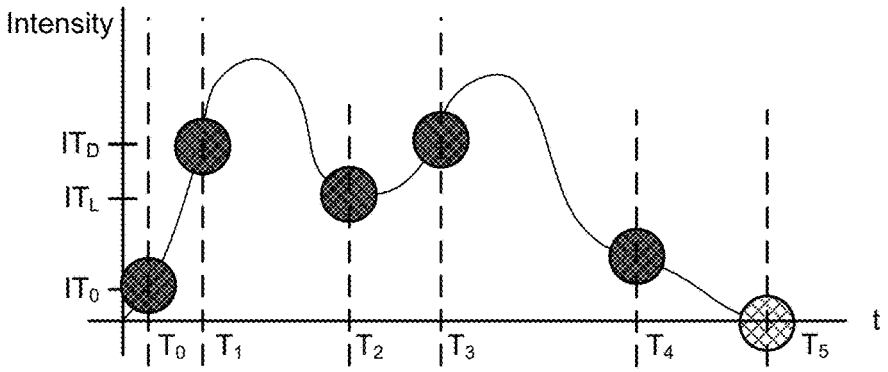
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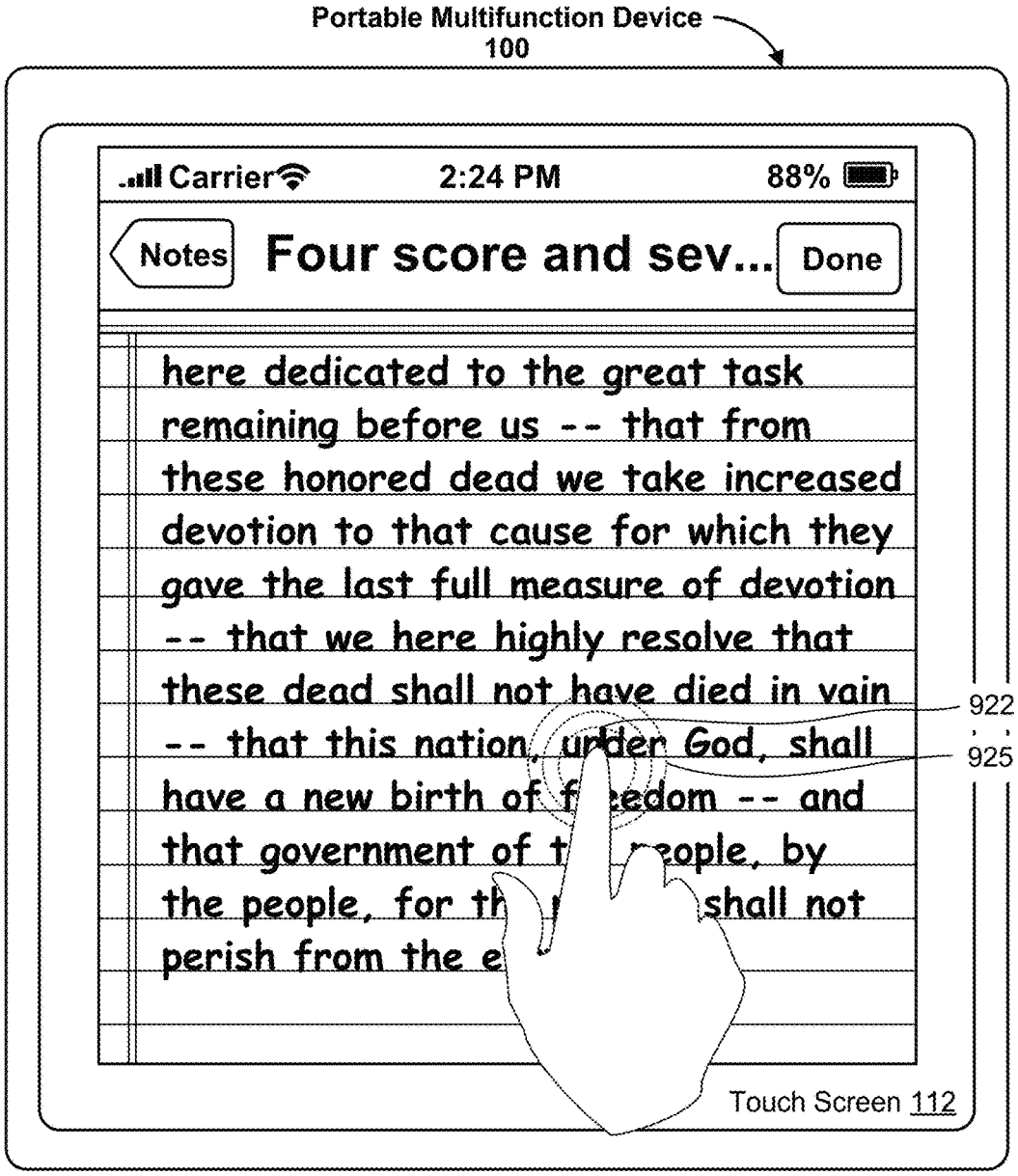
Figure 9T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these honored dead we take increased
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these dead shall not have died in vain
-- that this nation, under God, shall
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the people, for th shall not
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Touch Screen 112

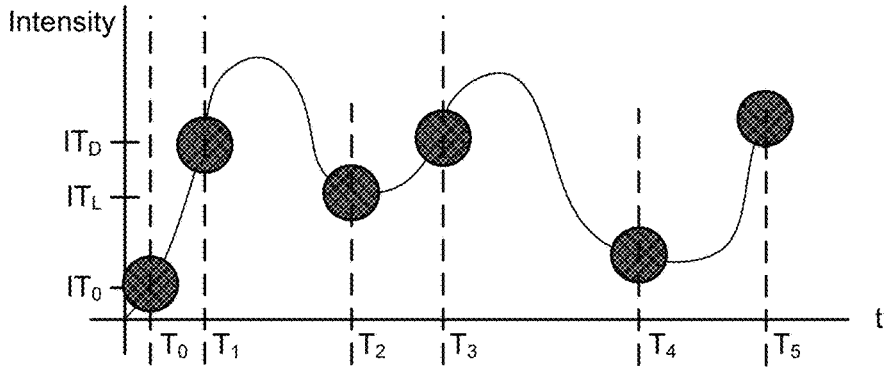
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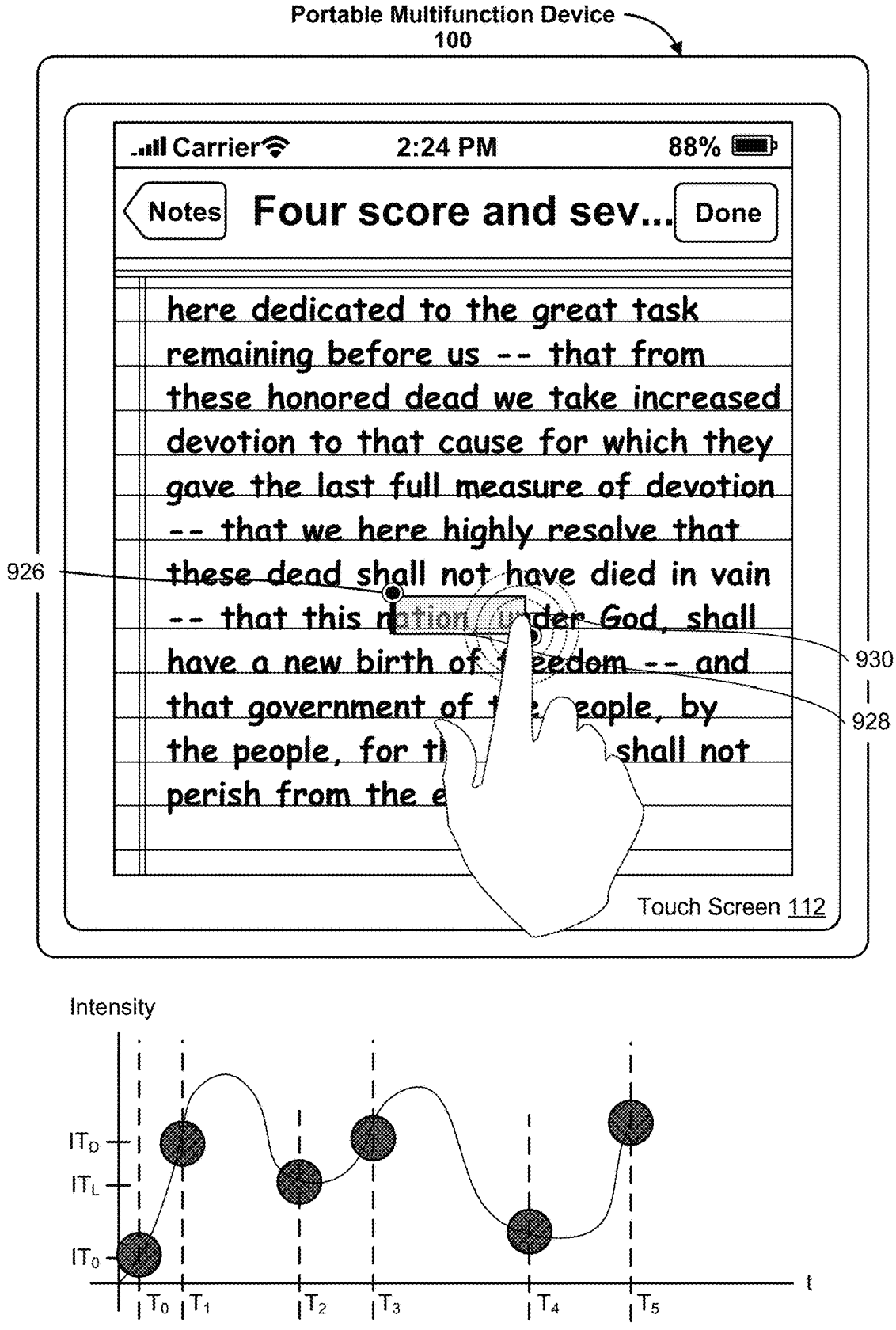
Figure 9U


Portable Multifunction Device
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-- that this nation, under God, shall
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that government of the people, by
the people, for the shall not
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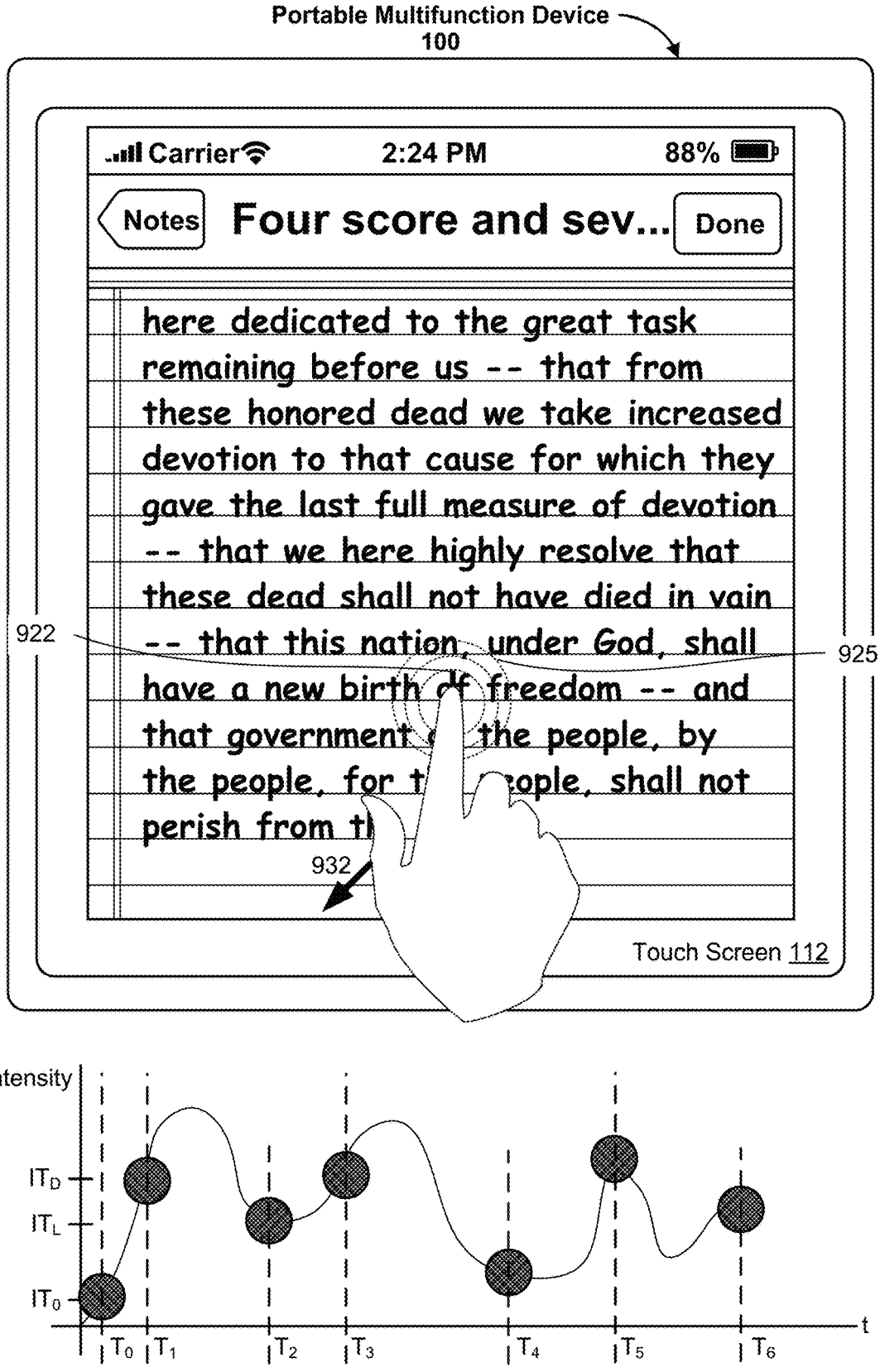
Figure 9V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-- that we here highly resolve that
these dead shall not have died in vain
-- that this nation, under God, shall
have a new birth of freedom -- and
that government of the people, by
the people, for the people, shall not
perish from the
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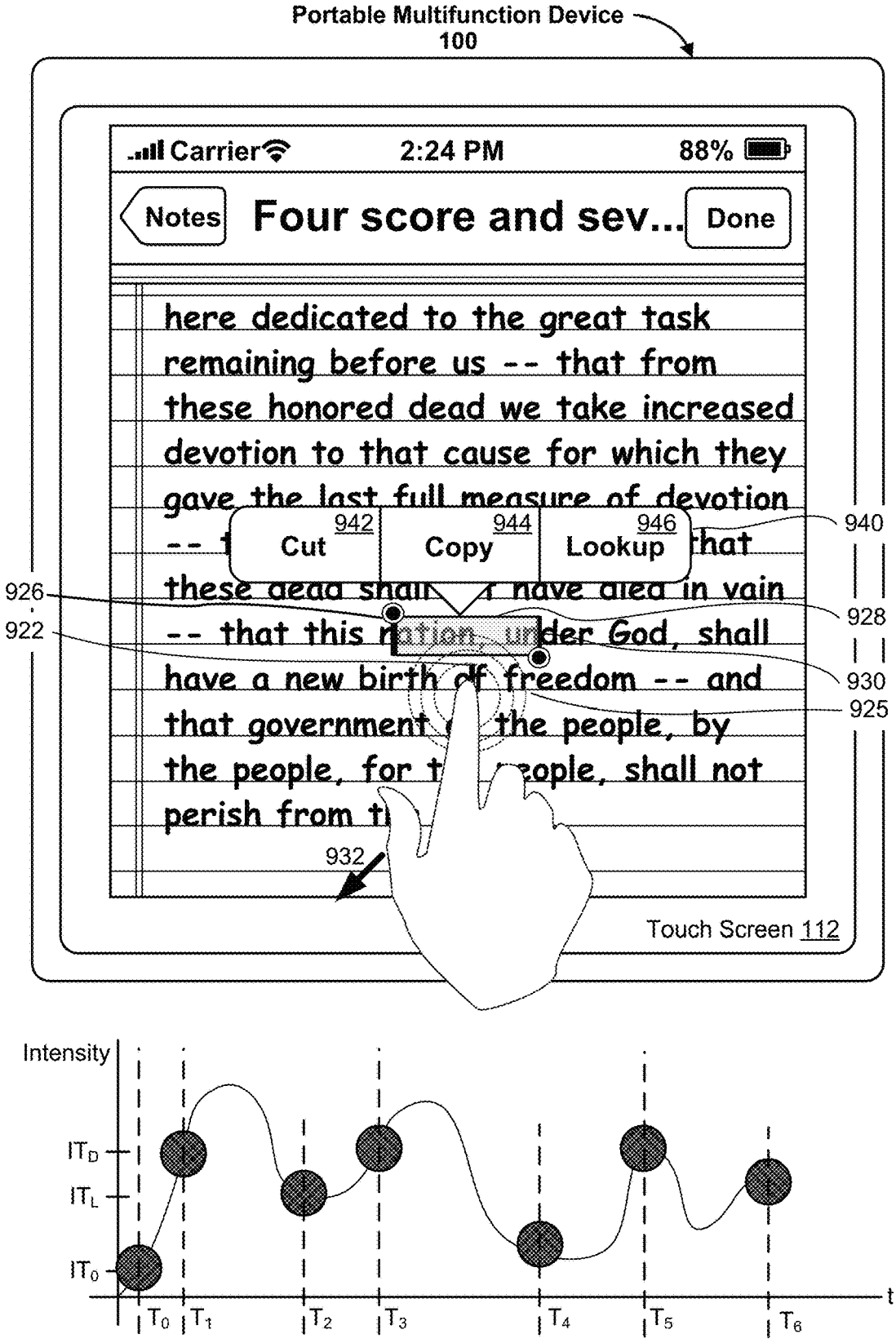
Figure 9W


Portable Multifunction Device
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Notes
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these honored dead we take increased
devotion to that cause for which they
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-- that this nation, under God, shall
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that government of the people, by
the people, for the people, shall not
perish from
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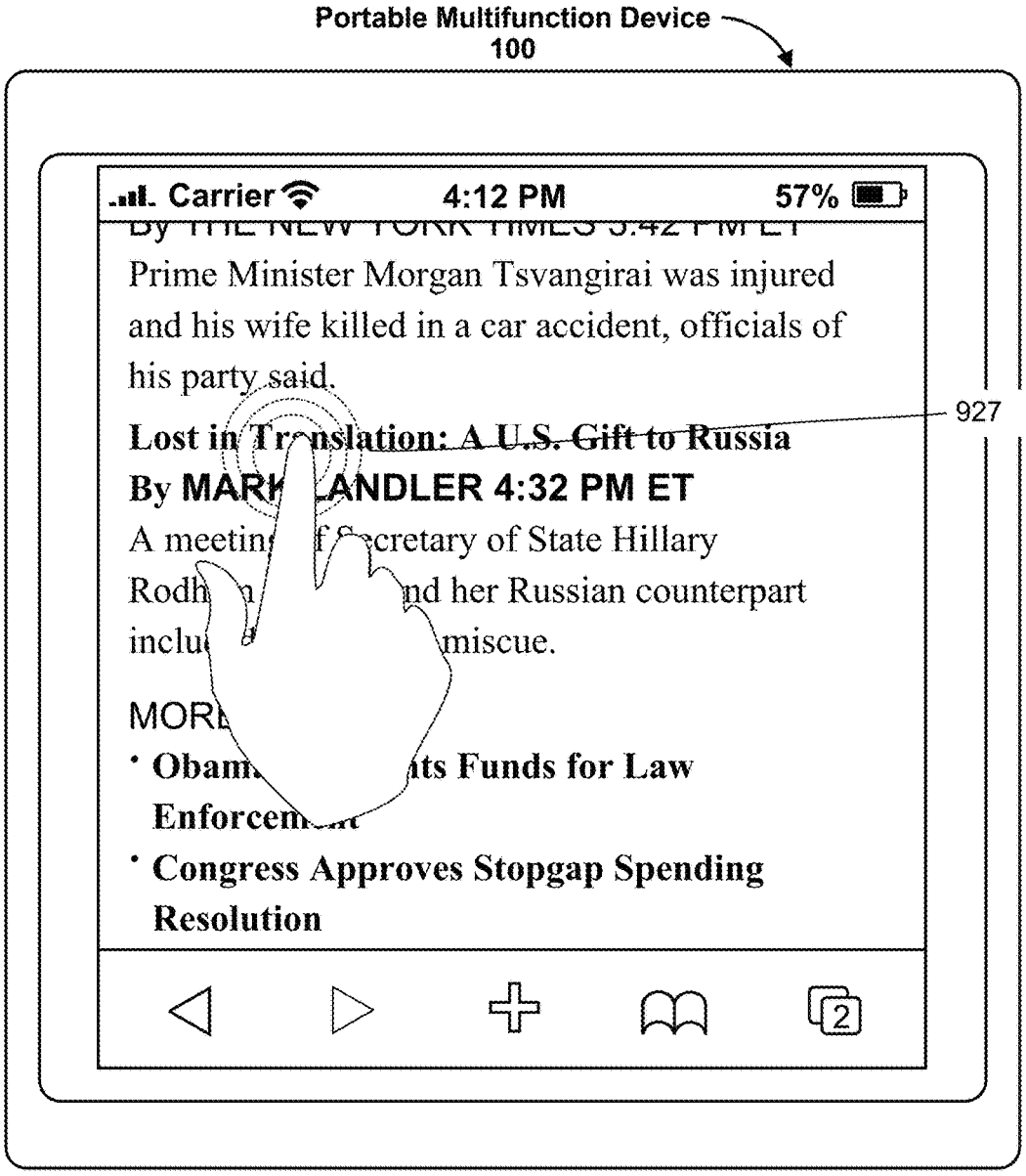
Figure 9X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57%
Prime Minister Morgan Tsvangirai was injured and his wife killed in a car accident, officials of his party said.
927
Lost in Translation: A U.S. Gift to Russia
By MARK LANDLER 4:32 PM ET
A meeting of Secretary of State Hillary Rodham and her Russian counterpart includ miscue.
MORE
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Congress Approves Stopgap Spending Resolution
2

Intensity
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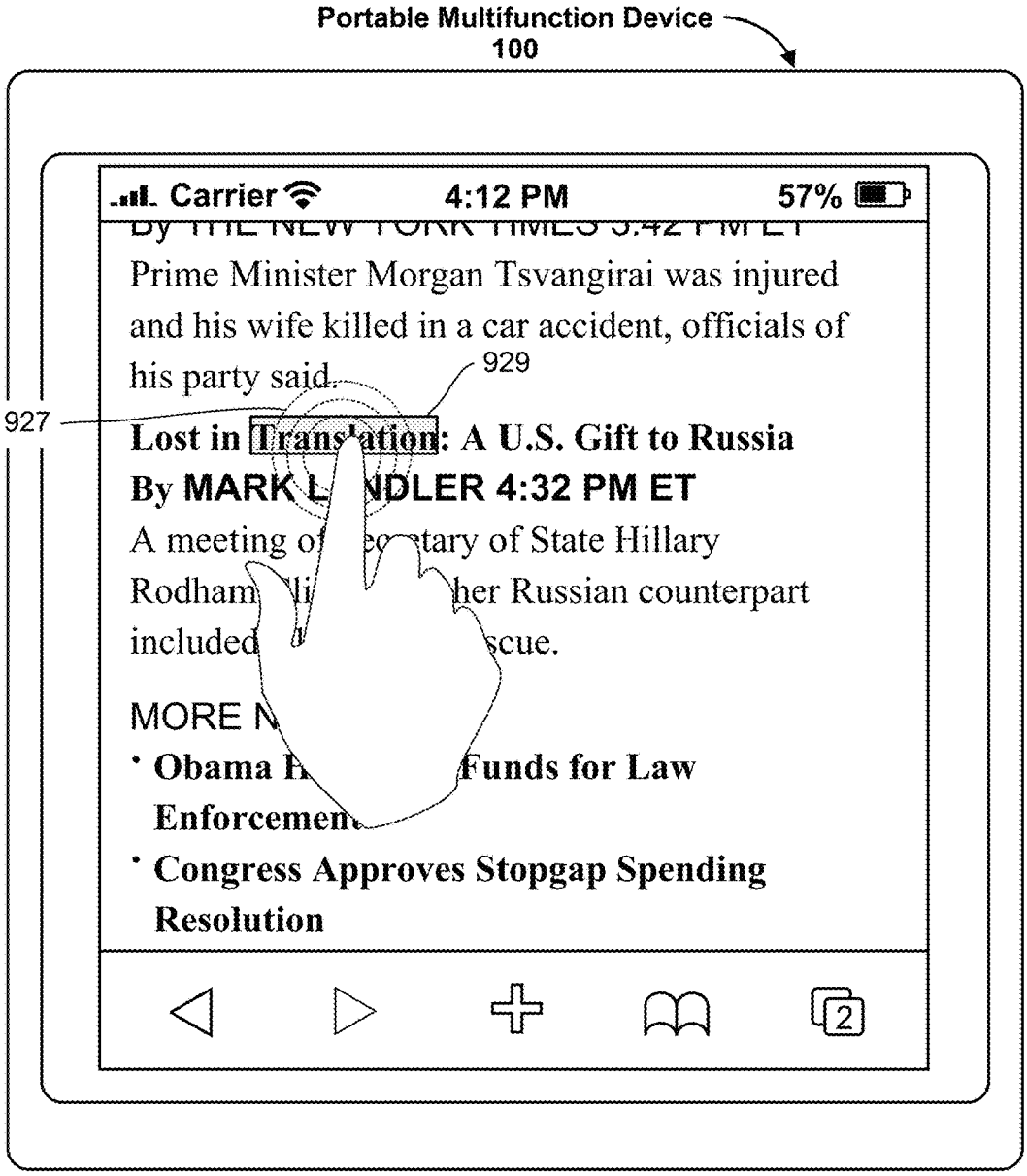
Figure 9Y


Portable Multifunction Device
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Lost in Translation: A U.S. Gift to Russia
By MARK L NDLER 4:32 PM ET
A meeting of tary of State Hillary Rodham li her Russian counterpart included scue.
MORE N
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Congress Approves Stopgap Spending Resolution
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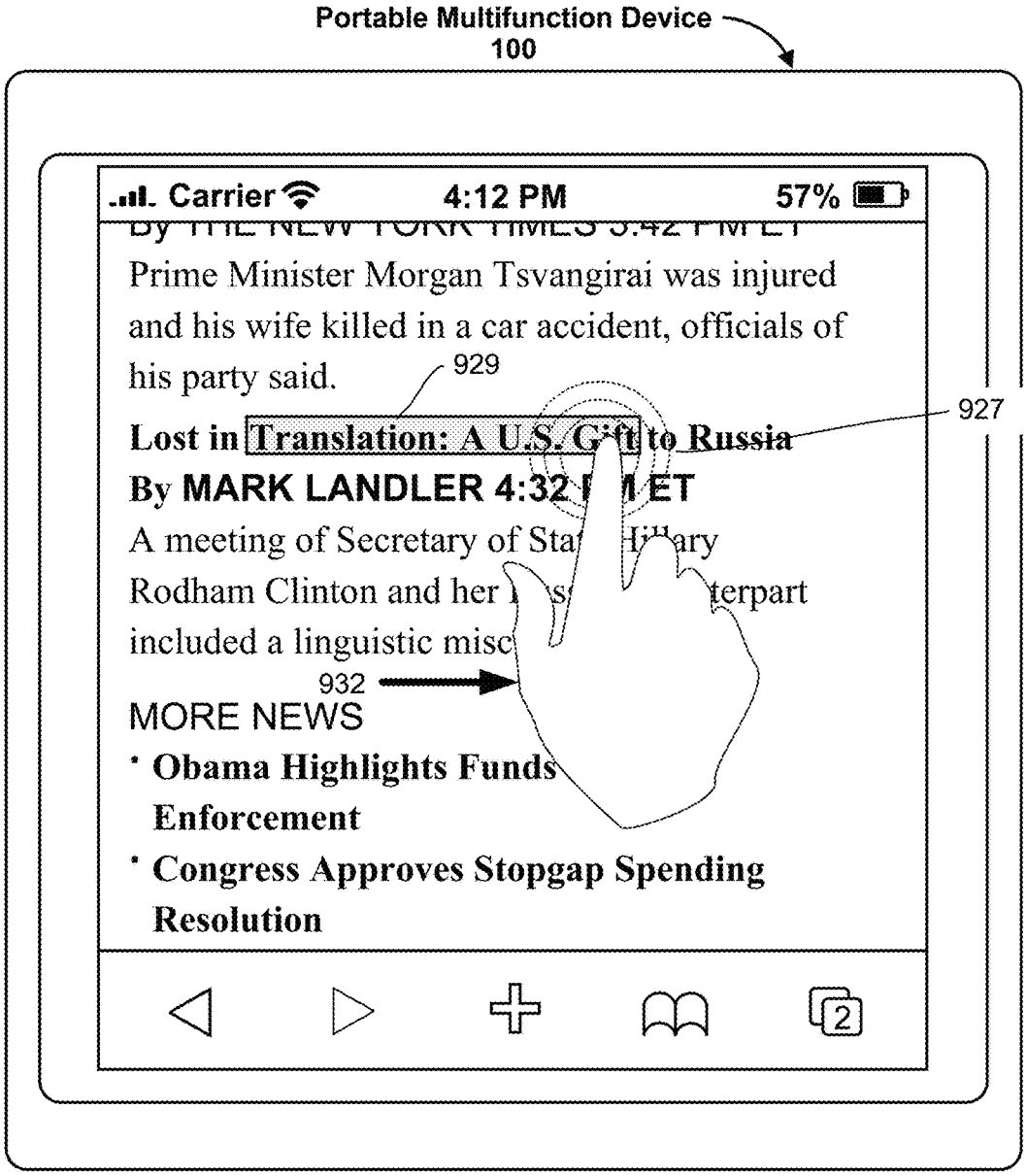
Figure 9Z


Portable Multifunction Device
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Lost in Translation: A U.S. Gift to Russia
By MARK LANDLER 4:32
A meeting of Secretary of Sta Hillary Rodham Clinton and her terpart included a linguistic misc
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MORE NEWS
Obama Highlights Funds Enforcement
Congress Approves Stopgap Spending Resolution
2

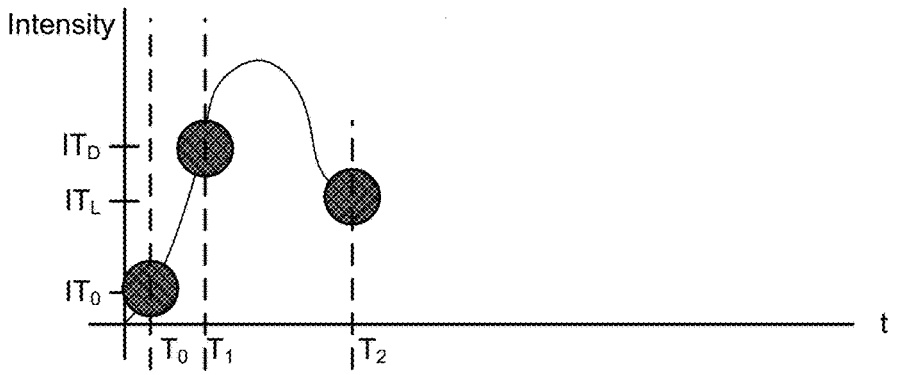
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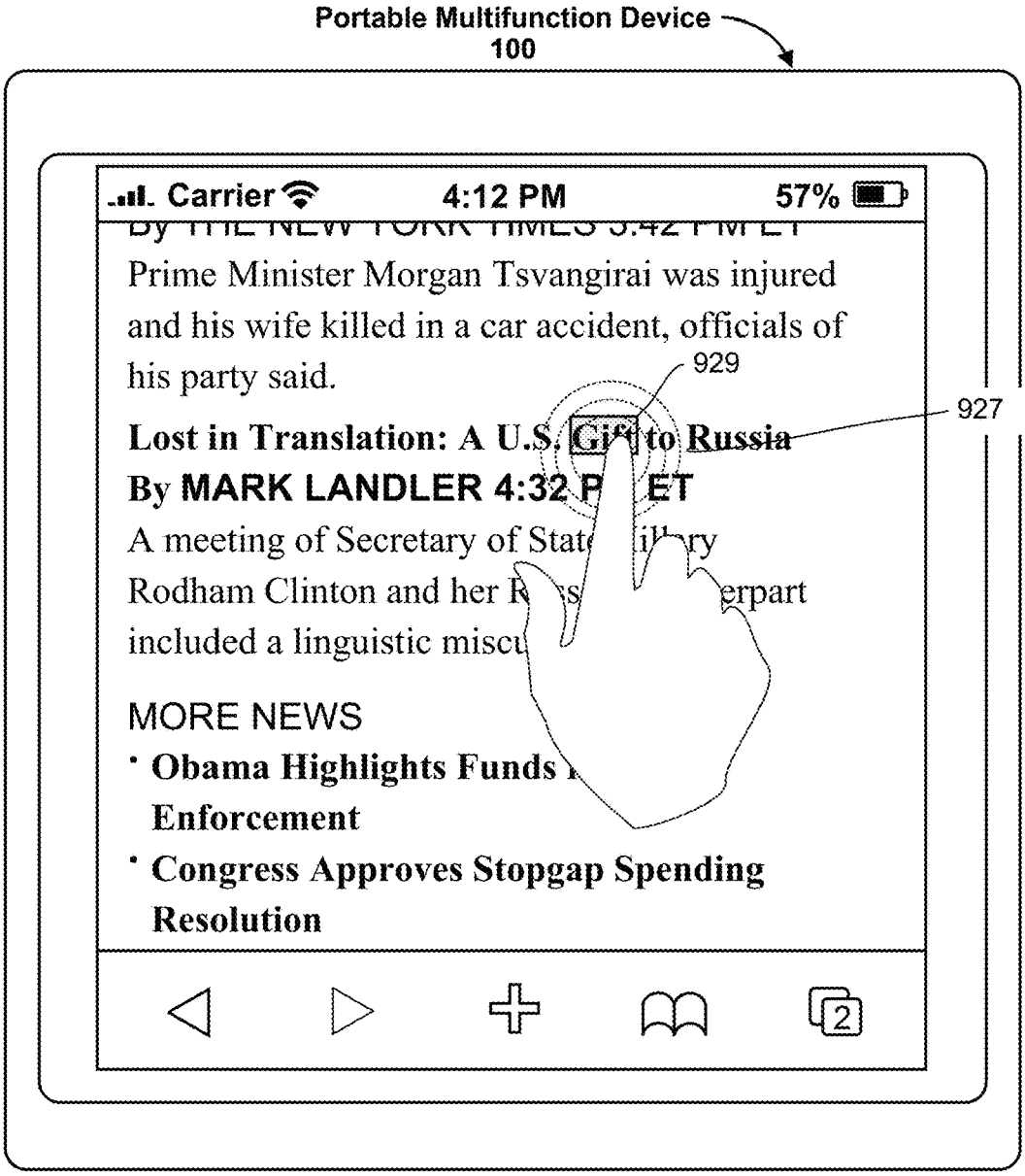
Figure 9AA


Portable Multifunction Device
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Prime Minister Morgan Tsvangirai was injured and his wife killed in a car accident, officials of his party said.
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Lost in Translation: A U.S. Gift to Russia
By MARK LANDLER 4:32 P ET
A meeting of Secretary of State ry Rodham Clinton and her R s erpart included a linguistic misc
MORE NEWS
Obama Highlights Funds Enforcement
Congress Approves Stopgap Spending Resolution
2

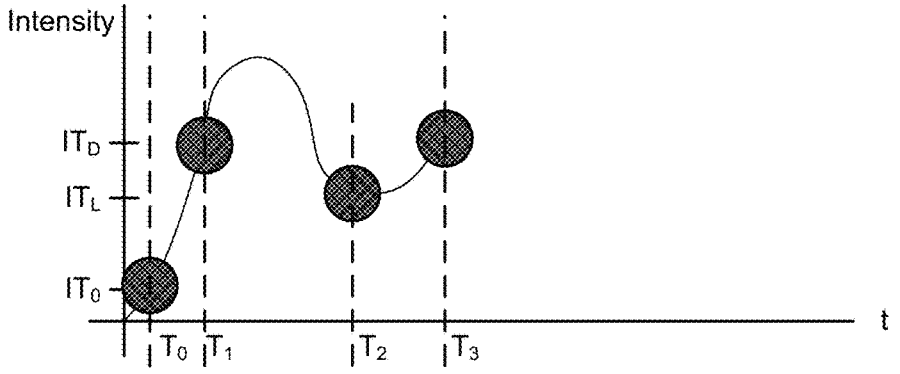
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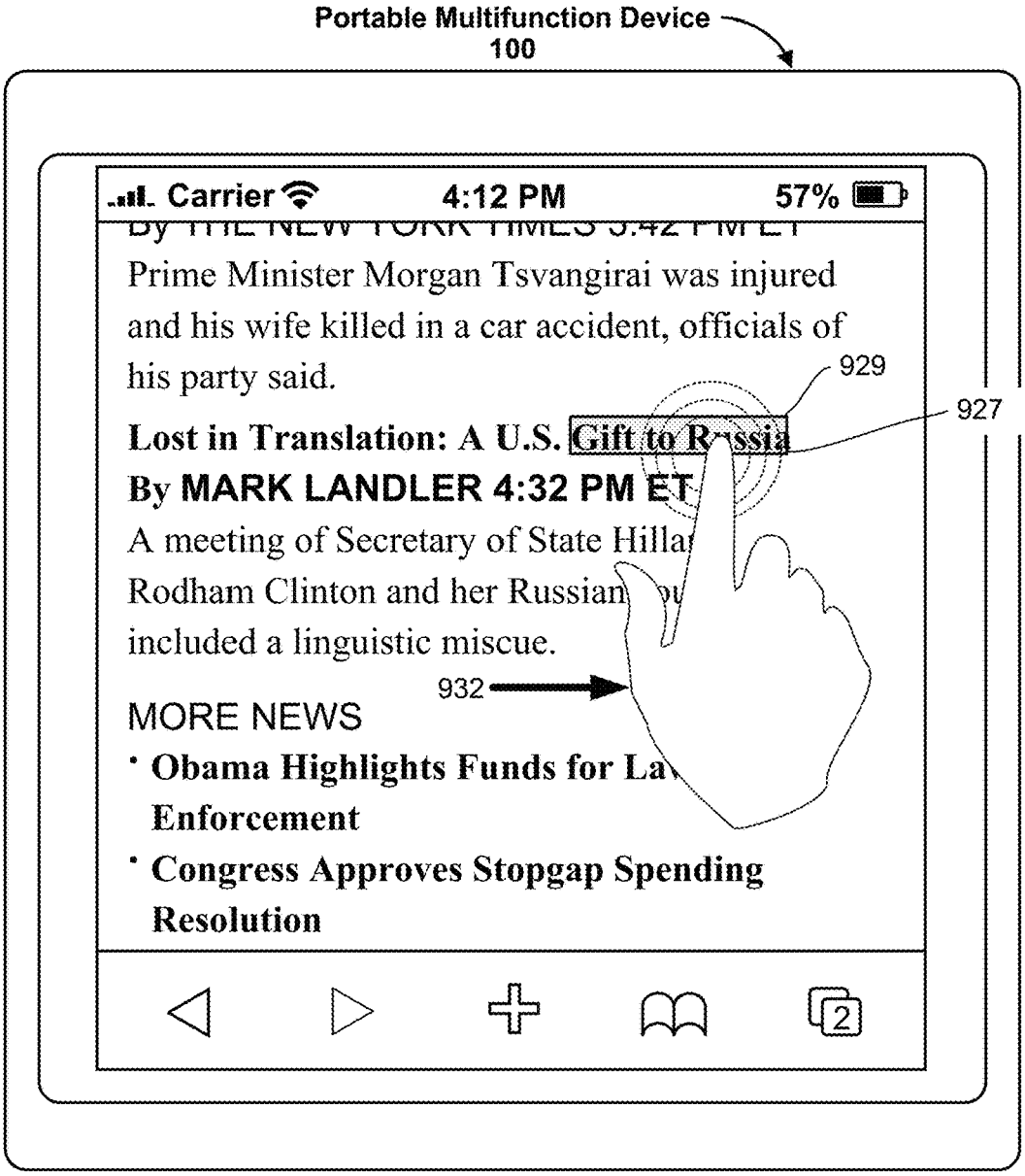
Figure 9AB


Portable Multifunction Device
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Lost in Translation: A U.S. Gift to R ssia
By MARK LANDLER 4:32 PM ET
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Rodham Clinton and her Russian
included a linguistic miscue.
932
MORE NEWS
Obama Highlights Funds for La
Enforcement
Congress Approves Stopgap Spending Resolution
2

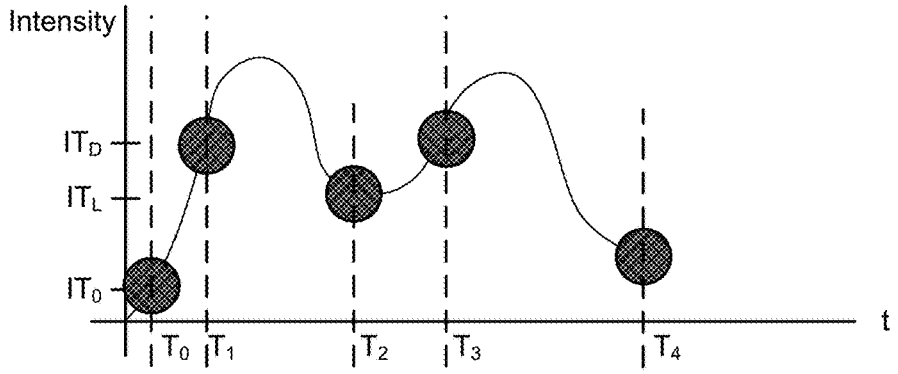
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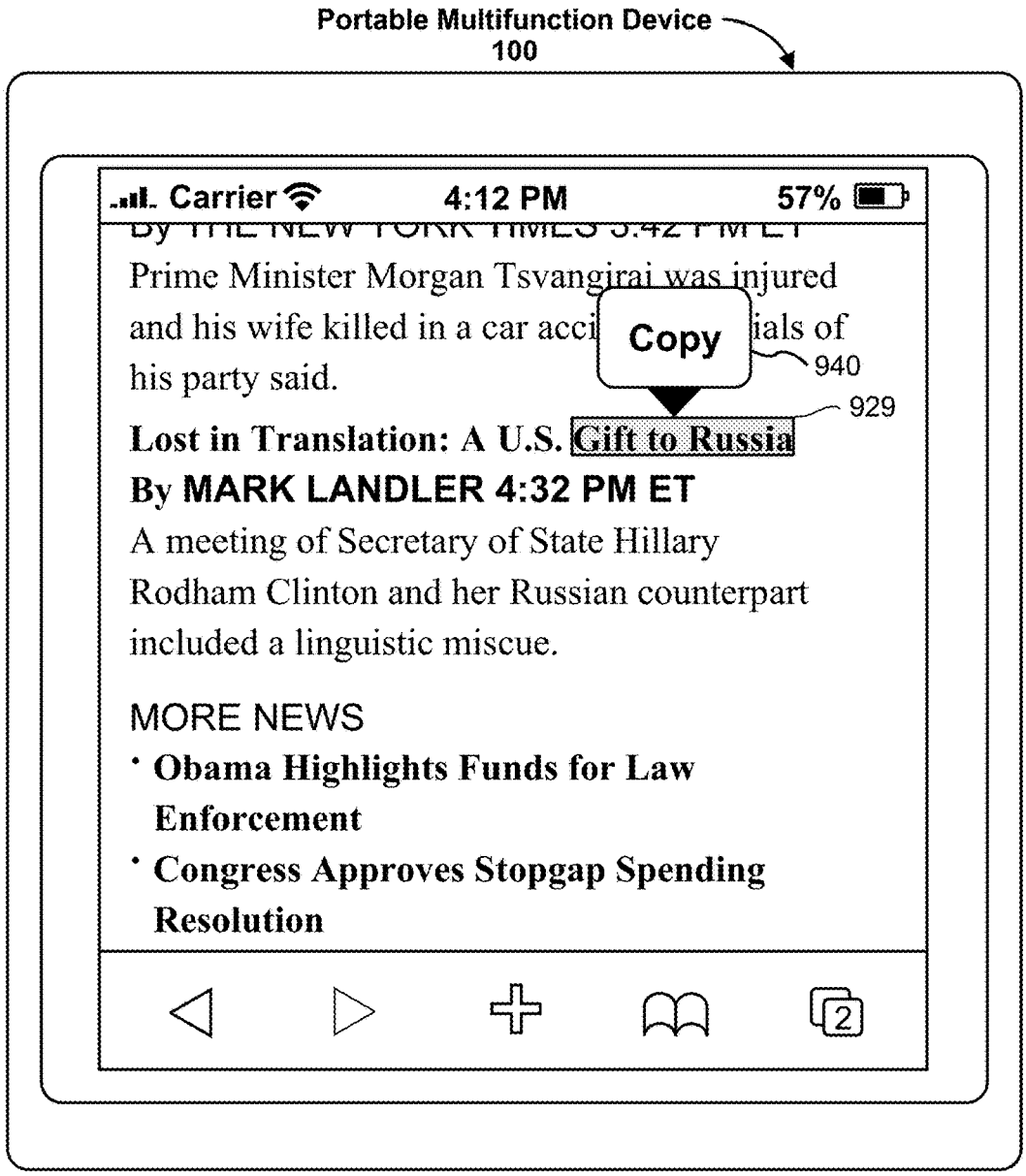
Figure 9AC


Portable Multifunction Device
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57%
Prime Minister Morgan Tsvangirai was injured
and his wife killed in a car acci
ials of
his party said.
Copy
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929
Lost in Translation: A U.S. Gift to Russia
By MARK LANDLER 4:32 PM ET
A meeting of Secretary of State Hillary
Rodham Clinton and her Russian counterpart
included a linguistic miscue.
MORE NEWS
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Enforcement
Congress Approves Stopgap Spending
Resolution
2

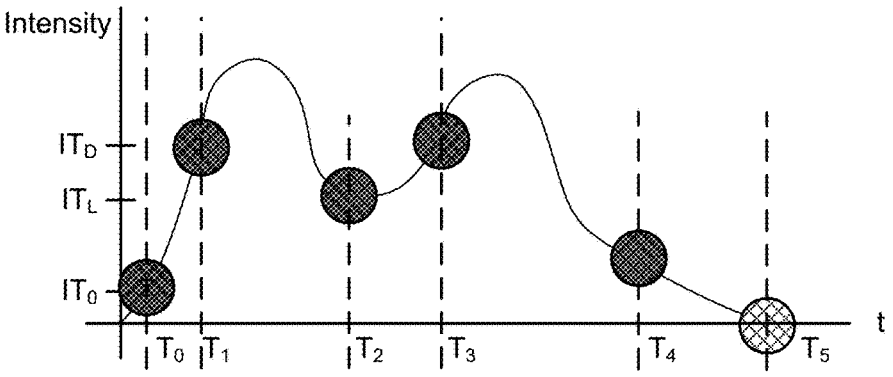
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Figure 9AD

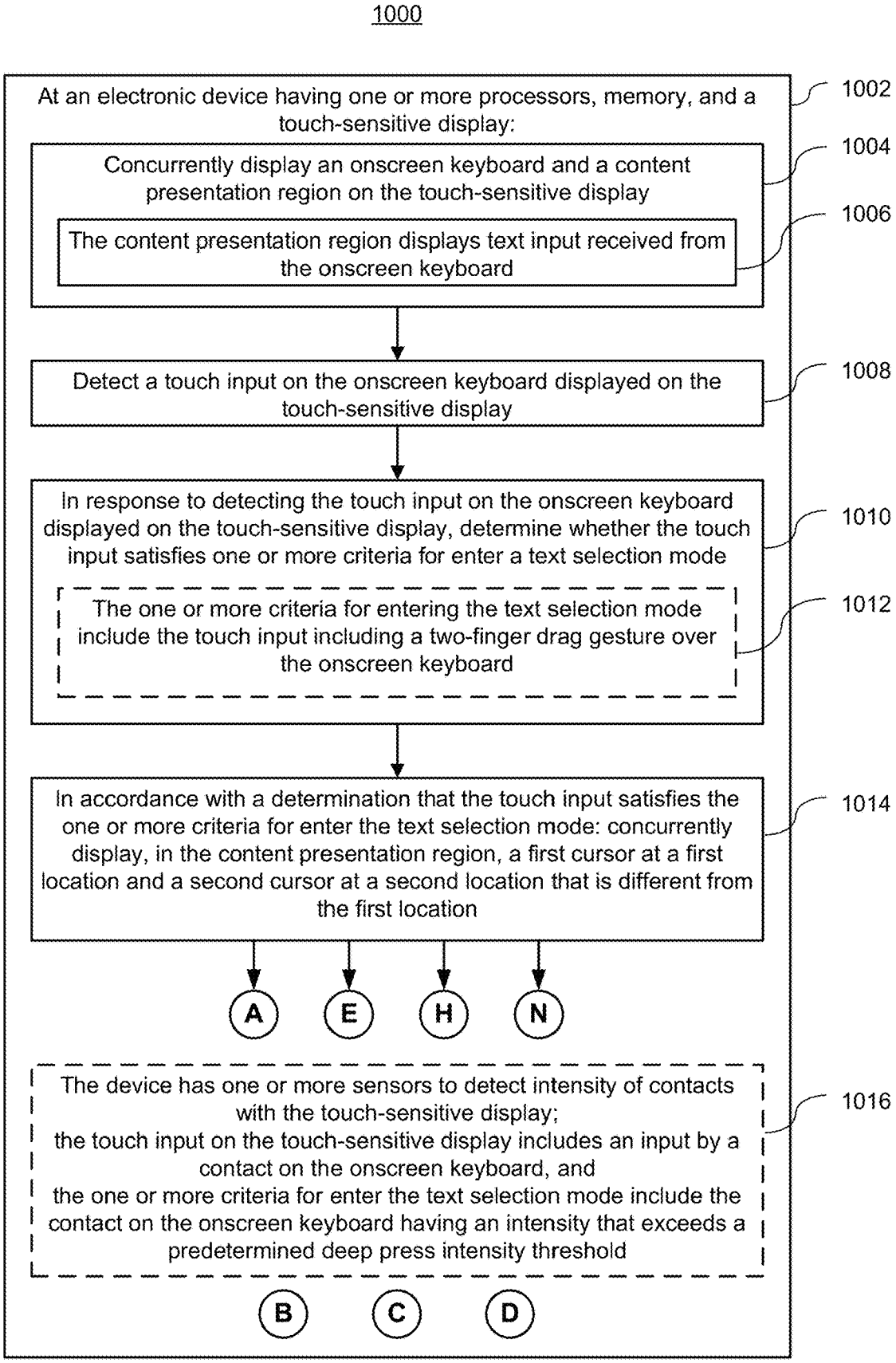

1000
At an electronic device having one or more processors, memory, and a touch-sensitive display:
1002
Concurrently display an onscreen keyboard and a content presentation region on the touch-sensitive display
1004
The content presentation region displays text input received from the onscreen keyboard
1006
Detect a touch input on the onscreen keyboard displayed on the touch-sensitive display
1008
In response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display, determine whether the touch input satisfies one or more criteria for enter a text selection mode
1010
The one or more criteria for entering the text selection mode include the touch input including a two-finger drag gesture over the onscreen keyboard
1012
In accordance with a determination that the touch input satisfies the one or more criteria for enter the text selection mode: concurrently display, in the content presentation region, a first cursor at a first location and a second cursor at a second location that is different from the first location
1014
A
E
H
N
The device has one or more sensors to detect intensity of contacts with the touch-sensitive display;
the touch input on the touch-sensitive display includes an input by a contact on the onscreen keyboard, and
the one or more criteria for enter the text selection mode include the contact on the onscreen keyboard having an intensity that exceeds a predetermined deep press intensity threshold
1016
B
C
D

Figure 10A

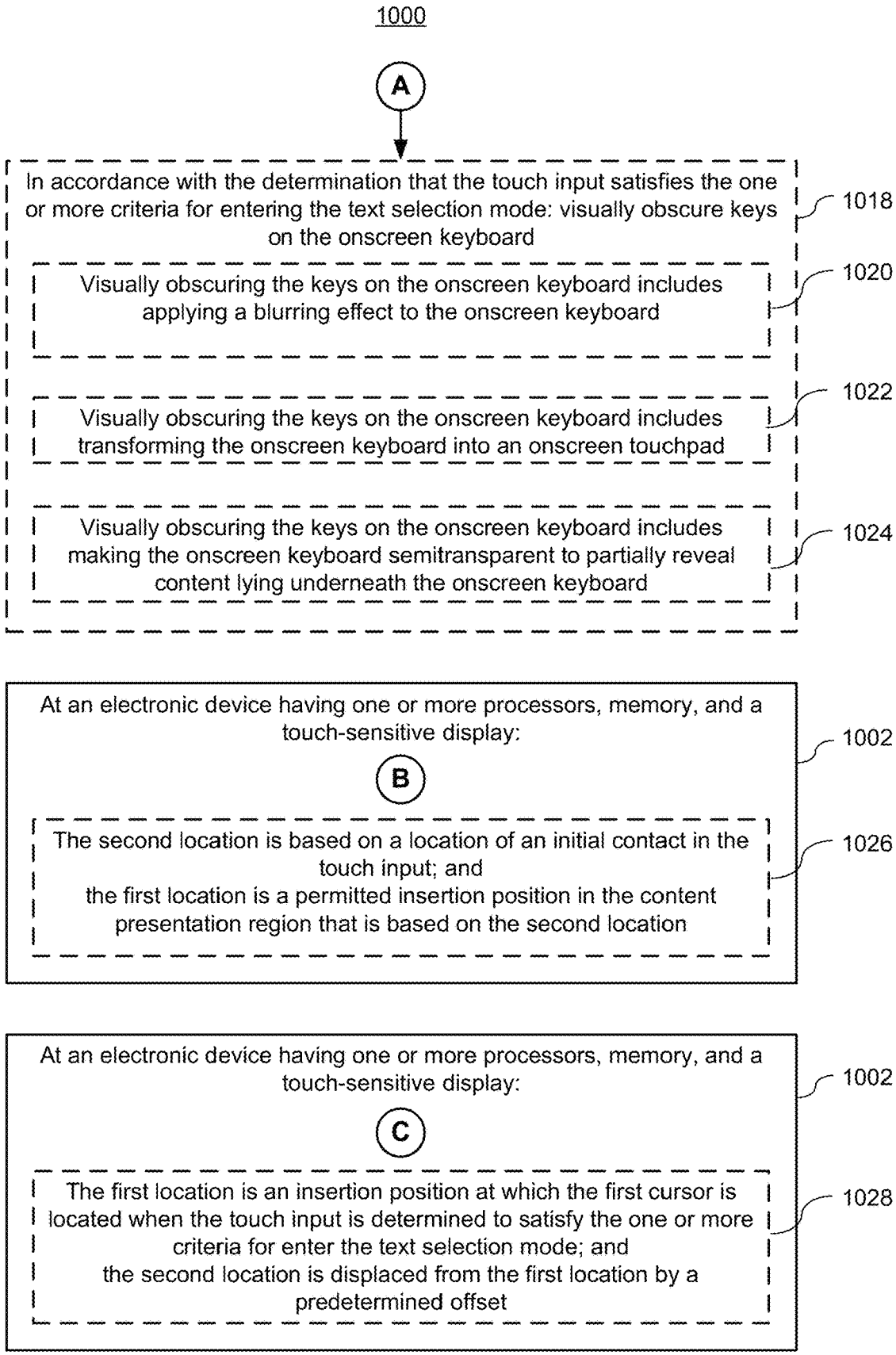

1000
A
In accordance with the determination that the touch input satisfies the one or more criteria for entering the text selection mode: visually obscure keys on the onscreen keyboard
1018
Visually obscuring the keys on the onscreen keyboard includes applying a blurring effect to the onscreen keyboard
1020
Visually obscuring the keys on the onscreen keyboard includes transforming the onscreen keyboard into an onscreen touchpad
1022
Visually obscuring the keys on the onscreen keyboard includes making the onscreen keyboard semitransparent to partially reveal content lying underneath the onscreen keyboard
1024
At an electronic device having one or more processors, memory, and a touch-sensitive display:
1002
B
The second location is based on a location of an initial contact in the touch input; and
the first location is a permitted insertion position in the content presentation region that is based on the second location
1026
At an electronic device having one or more processors, memory, and a touch-sensitive display:
1002
C
The first location is an insertion position at which the first cursor is located when the touch input is determined to satisfy the one or more criteria for enter the text selection mode; and
the second location is displaced from the first location by a predetermined offset
1028

Figure 10B

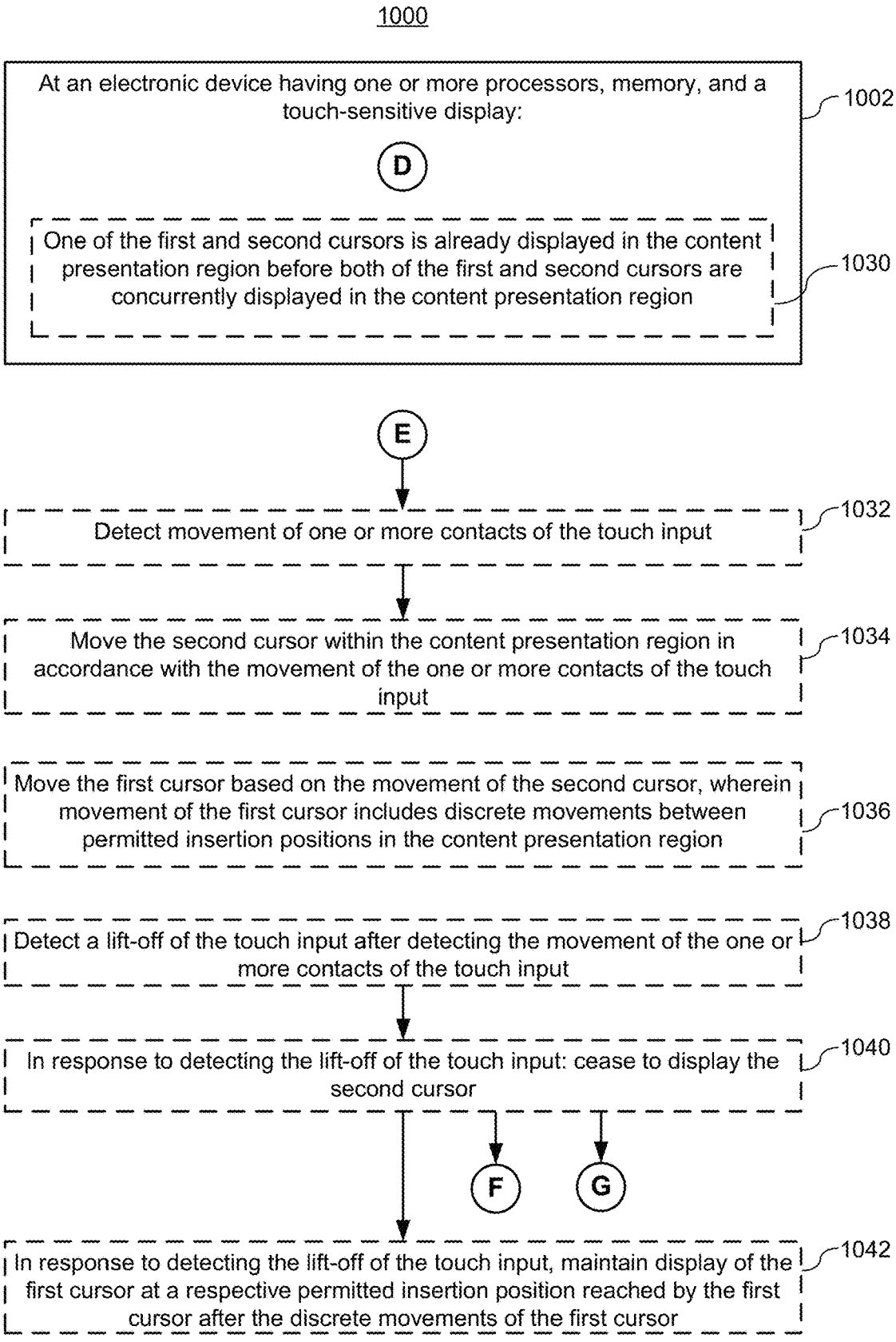

1000
At an electronic device having one or more processors, memory, and a touch-sensitive display:
1002
D
One of the first and second cursors is already displayed in the content presentation region before both of the first and second cursors are concurrently displayed in the content presentation region
1030
E
Detect movement of one or more contacts of the touch input
1032
Move the second cursor within the content presentation region in accordance with the movement of the one or more contacts of the touch input
1034
Move the first cursor based on the movement of the second cursor, wherein movement of the first cursor includes discrete movements between permitted insertion positions in the content presentation region
1036
Detect a lift-off of the touch input after detecting the movement of the one or more contacts of the touch input
1038
In response to detecting the lift-off of the touch input: cease to display the second cursor
1040
F
G
In response to detecting the lift-off of the touch input, maintain display of the first cursor at a respective permitted insertion position reached by the first cursor after the discrete movements of the first cursor
1042

Figure 10C

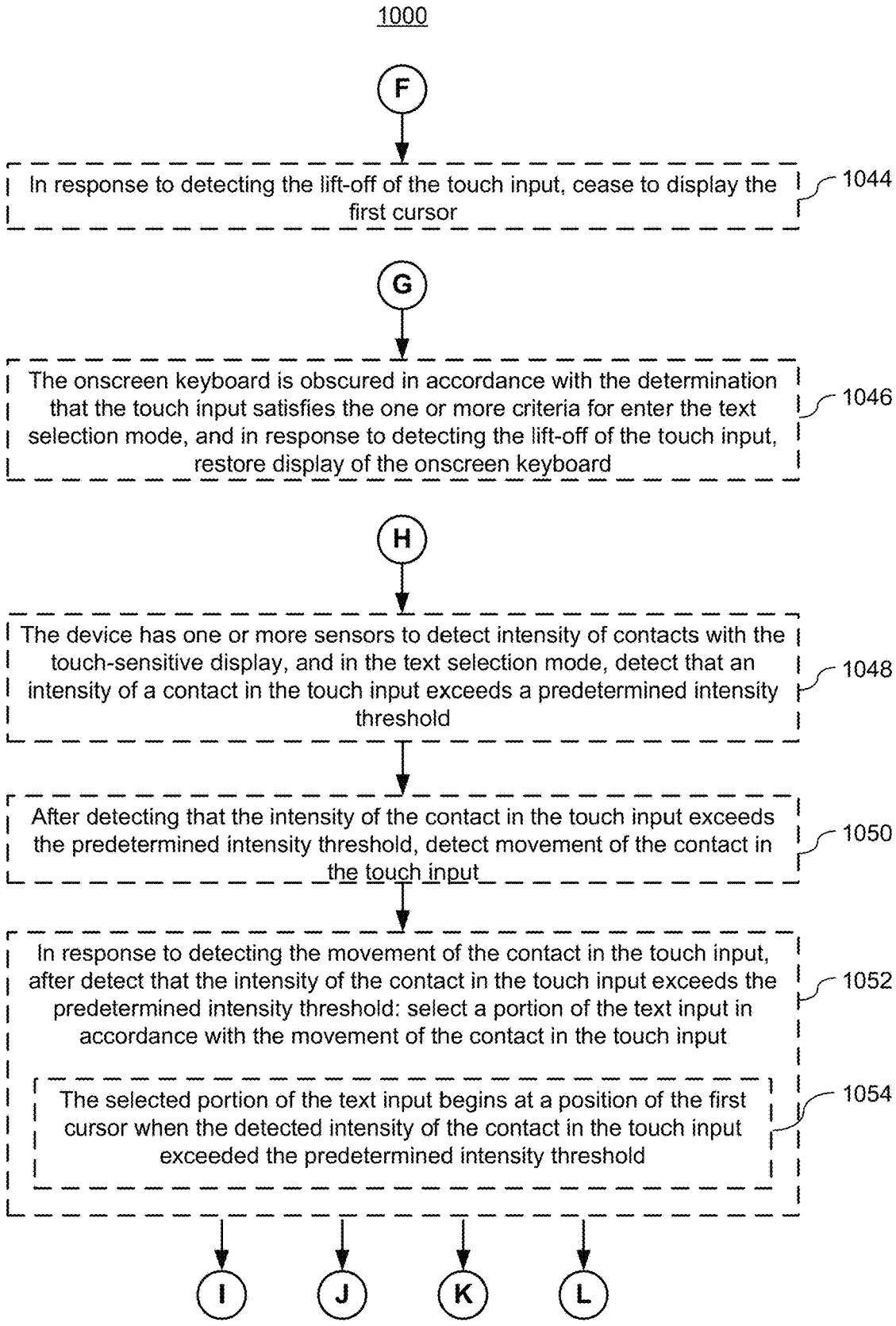

1000
F
In response to detecting the lift-off of the touch input, cease to display the first cursor
1044
G
The onscreen keyboard is obscured in accordance with the determination that the touch input satisfies the one or more criteria for enter the text selection mode, and in response to detecting the lift-off of the touch input, restore display of the onscreen keyboard
1046
H
The device has one or more sensors to detect intensity of contacts with the touch-sensitive display, and in the text selection mode, detect that an intensity of a contact in the touch input exceeds a predetermined intensity threshold
1048
After detecting that the intensity of the contact in the touch input exceeds the predetermined intensity threshold, detect movement of the contact in the touch input
1050
In response to detecting the movement of the contact in the touch input, after detect that the intensity of the contact in the touch input exceeds the predetermined intensity threshold: select a portion of the text input in accordance with the movement of the contact in the touch input
1052
The selected portion of the text input begins at a position of the first cursor when the detected intensity of the contact in the touch input exceeded the predetermined intensity threshold
1054
I
J
K
L

Figure 10D

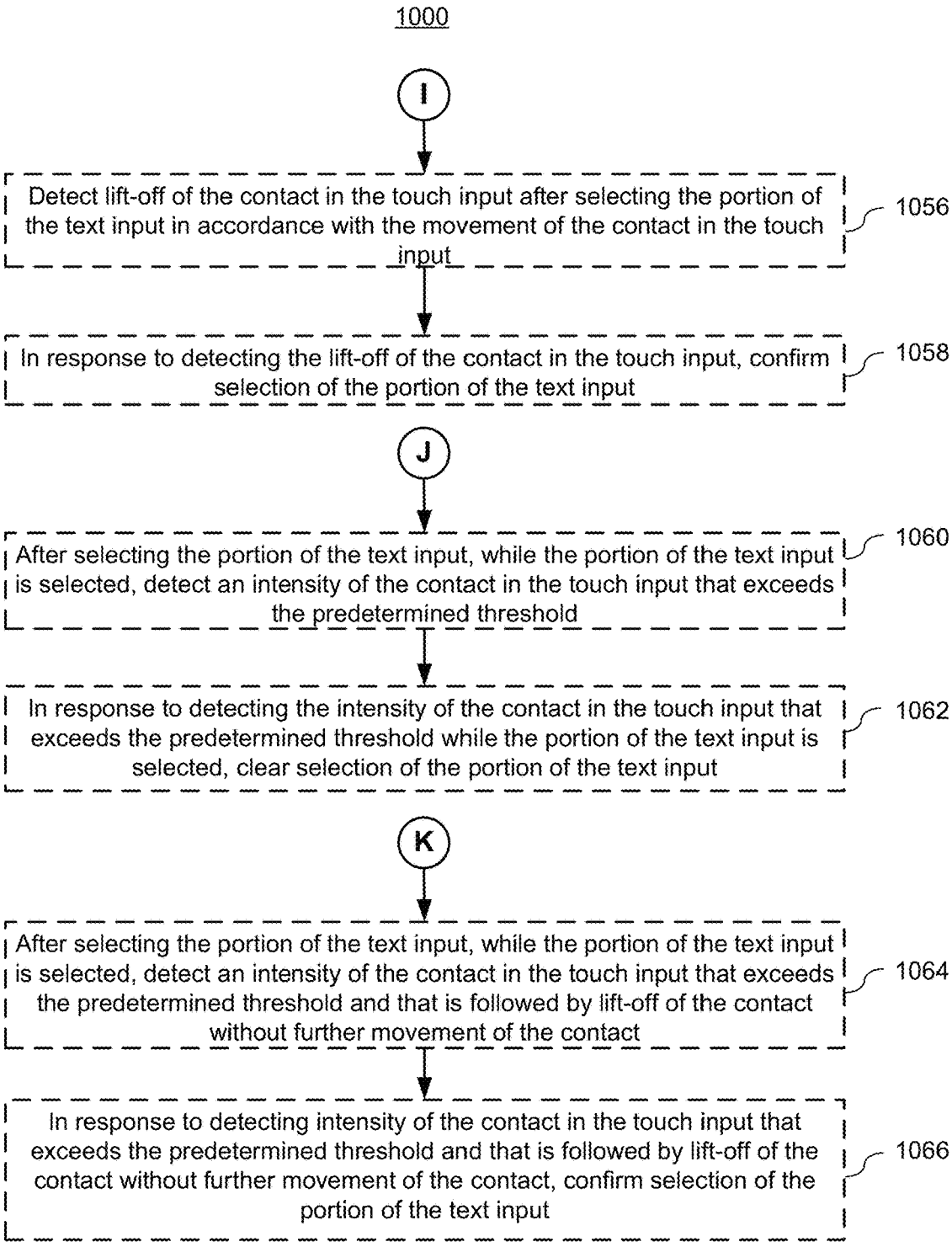

1000
I
Detect lift-off of the contact in the touch input after selecting the portion of the text input in accordance with the movement of the contact in the touch input
1056
In response to detecting the lift-off of the contact in the touch input, confirm selection of the portion of the text input
1058
J
After selecting the portion of the text input, while the portion of the text input is selected, detect an intensity of the contact in the touch input that exceeds the predetermined threshold
1060
In response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold while the portion of the text input is selected, clear selection of the portion of the text input
1062
K
After selecting the portion of the text input, while the portion of the text input is selected, detect an intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact
1064
In response to detecting intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact, confirm selection of the portion of the text input
1066

Figure 10E

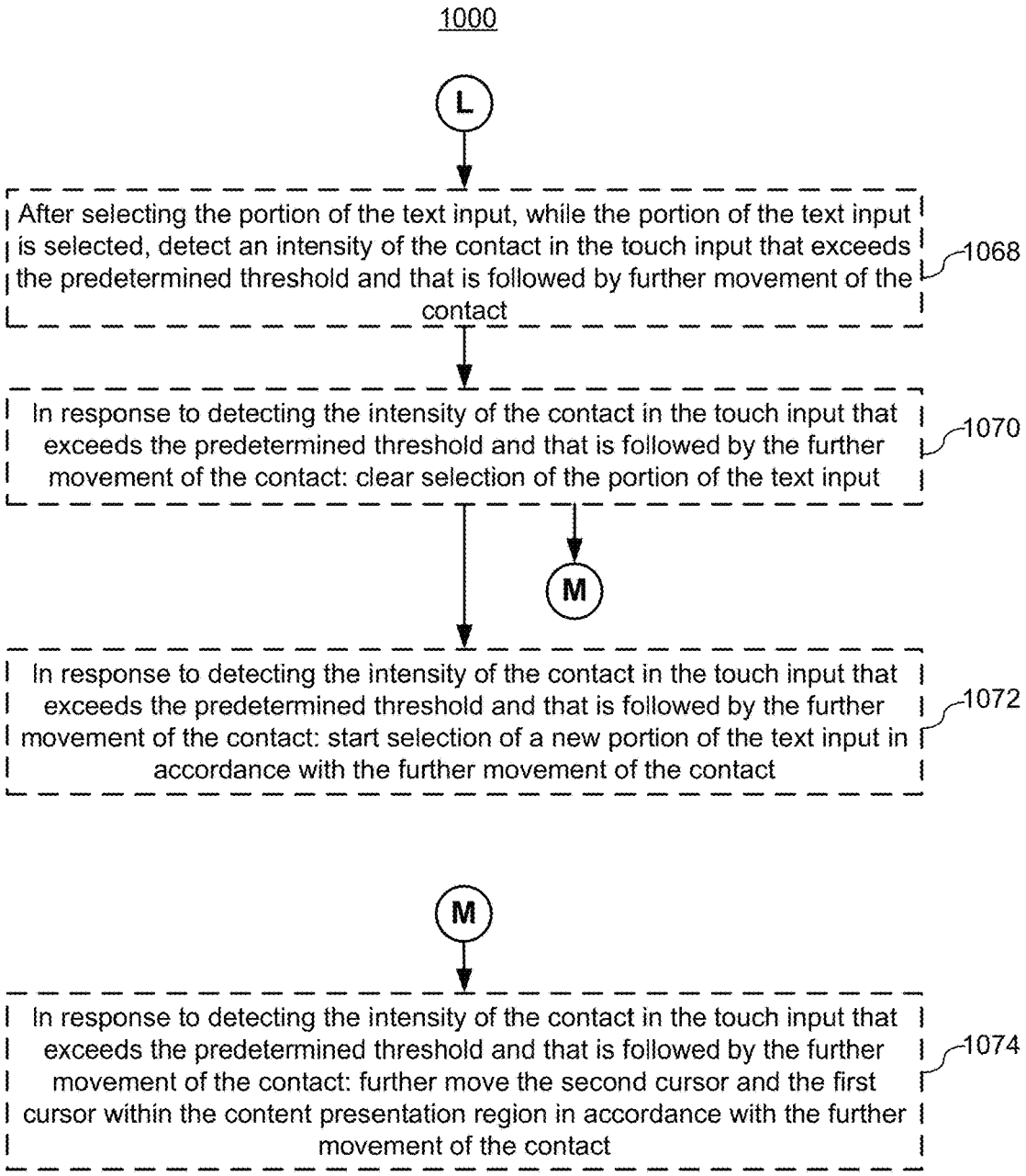

1000
L
After selecting the portion of the text input, while the portion of the text input is selected, detect an intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by further movement of the contact
1068
In response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: clear selection of the portion of the text input
1070
M
In response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: start selection of a new portion of the text input in accordance with the further movement of the contact
1072
M
In response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: further move the second cursor and the first cursor within the content presentation region in accordance with the further movement of the contact
1074

Figure 10F

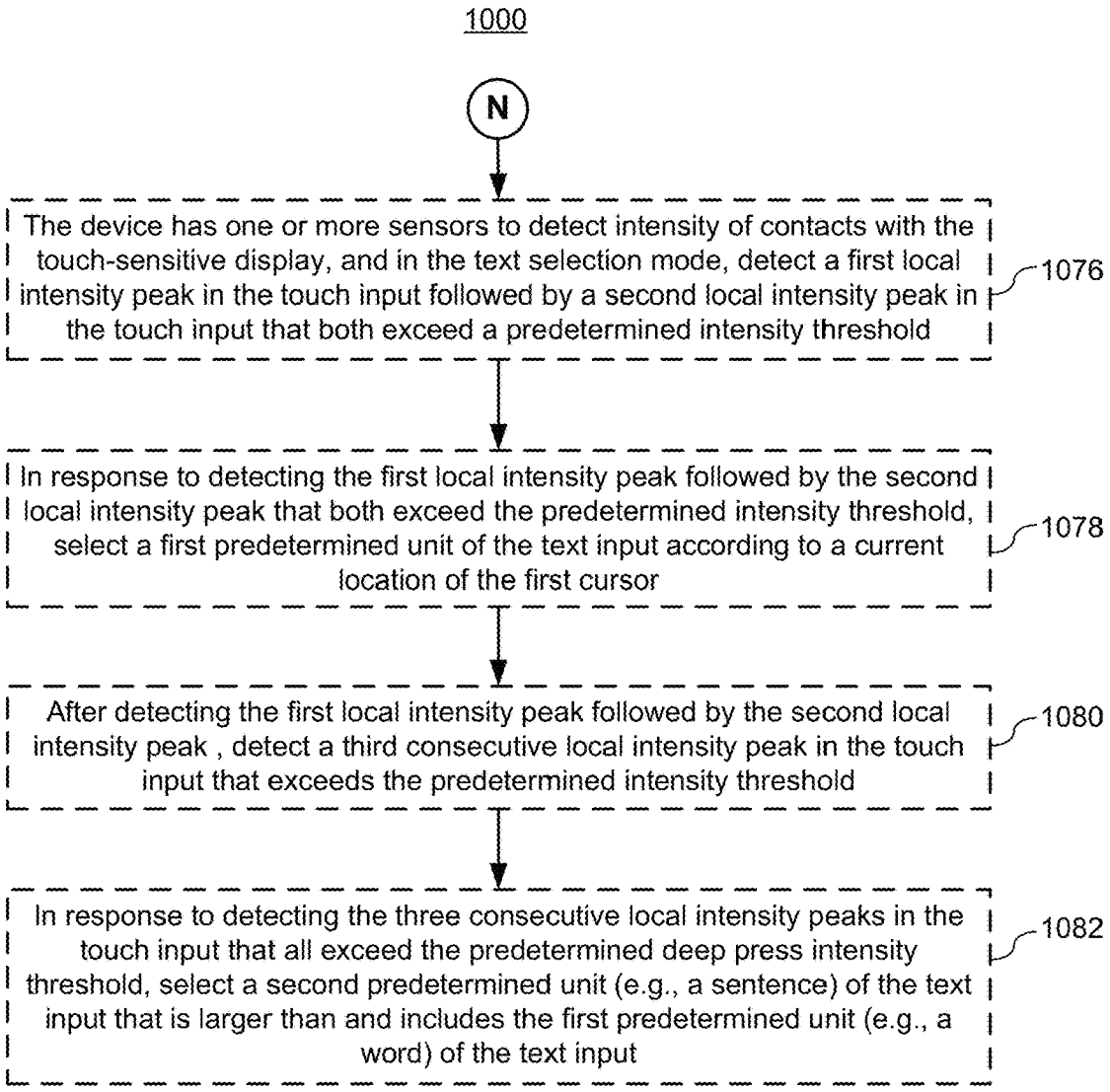

1000
N
The device has one or more sensors to detect intensity of contacts with the touch-sensitive display, and in the text selection mode, detect a first local intensity peak in the touch input followed by a second local intensity peak in the touch input that both exceed a predetermined intensity threshold
1076
In response to detecting the first local intensity peak followed by the second local intensity peak that both exceed the predetermined intensity threshold, select a first predetermined unit of the text input according to a current location of the first cursor
1078
After detecting the first local intensity peak followed by the second local intensity peak , detect a third consecutive local intensity peak in the touch input that exceeds the predetermined intensity threshold
1080
In response to detecting the three consecutive local intensity peaks in the touch input that all exceed the predetermined deep press intensity threshold, select a second predetermined unit (e.g., a sentence) of the text input that is larger than and includes the first predetermined unit (e.g., a word) of the text input
1082

Figure 10G

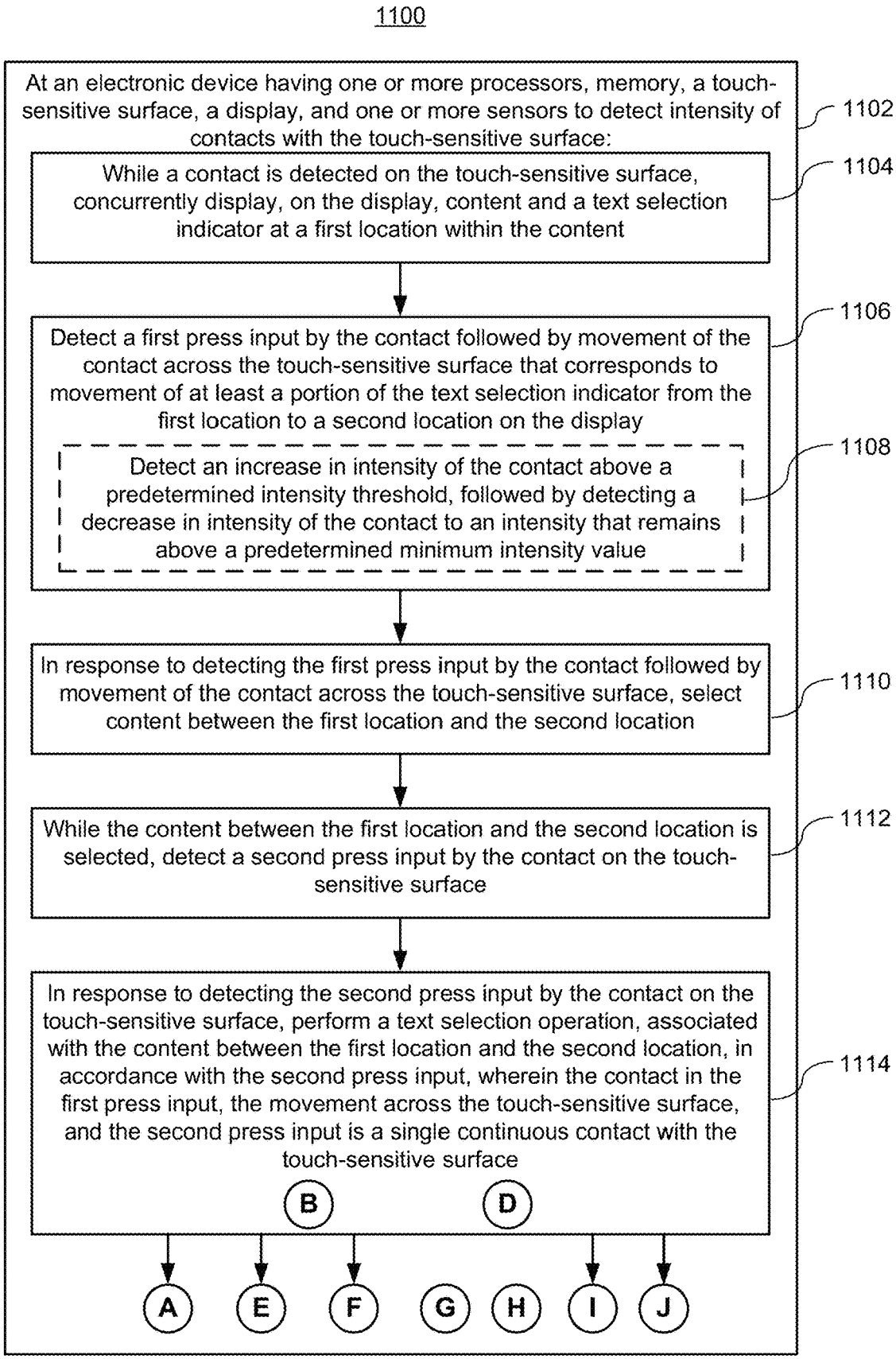

1100
At an electronic device having one or more processors, memory, a touch-sensitive surface, a display, and one or more sensors to detect intensity of contacts with the touch-sensitive surface:
1102
While a contact is detected on the touch-sensitive surface, concurrently display, on the display, content and a text selection indicator at a first location within the content
1104
Detect a first press input by the contact followed by movement of the contact across the touch-sensitive surface that corresponds to movement of at least a portion of the text selection indicator from the first location to a second location on the display
1106
Detect an increase in intensity of the contact above a predetermined intensity threshold, followed by detecting a decrease in intensity of the contact to an intensity that remains above a predetermined minimum intensity value
1108
In response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface, select content between the first location and the second location
1110
While the content between the first location and the second location is selected, detect a second press input by the contact on the touch-sensitive surface
1112
In response to detecting the second press input by the contact on the touch-sensitive surface, perform a text selection operation, associated with the content between the first location and the second location, in accordance with the second press input, wherein the contact in the first press input, the movement across the touch-sensitive surface, and the second press input is a single continuous contact with the touch-sensitive surface
1114
B
D
A
E
F
G
H
I
J

Figure 11A

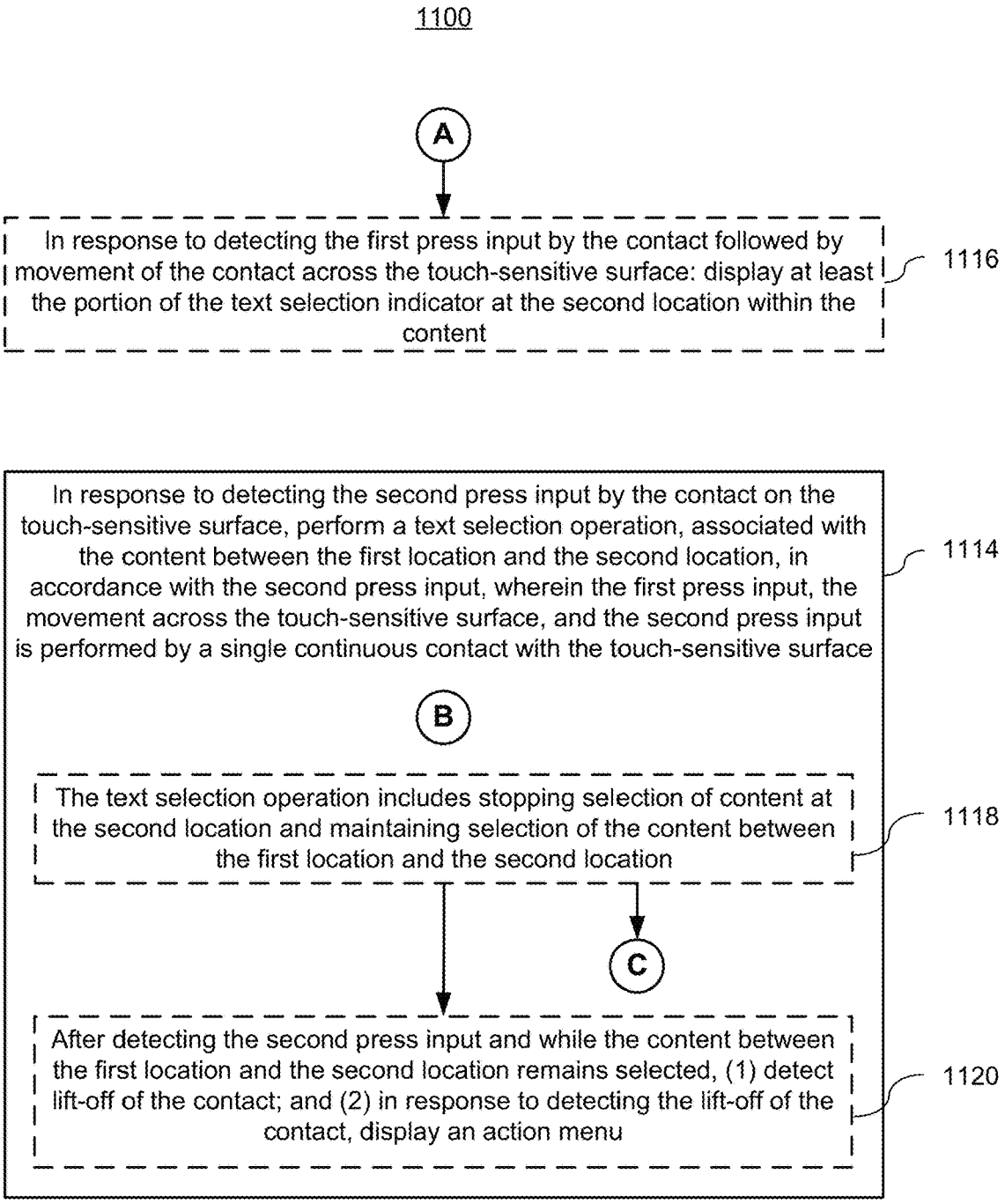

1100
A
In response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface: display at least the portion of the text selection indicator at the second location within the content
1116
In response to detecting the second press input by the contact on the touch-sensitive surface, perform a text selection operation, associated with the content between the first location and the second location, in accordance with the second press input, wherein the first press input, the movement across the touch-sensitive surface, and the second press input is performed by a single continuous contact with the touch-sensitive surface
1114
B
The text selection operation includes stopping selection of content at the second location and maintaining selection of the content between the first location and the second location
1118
C
After detecting the second press input and while the content between the first location and the second location remains selected, (1) detect lift-off of the contact; and (2) in response to detecting the lift-off of the contact, display an action menu
1120

Figure 11B

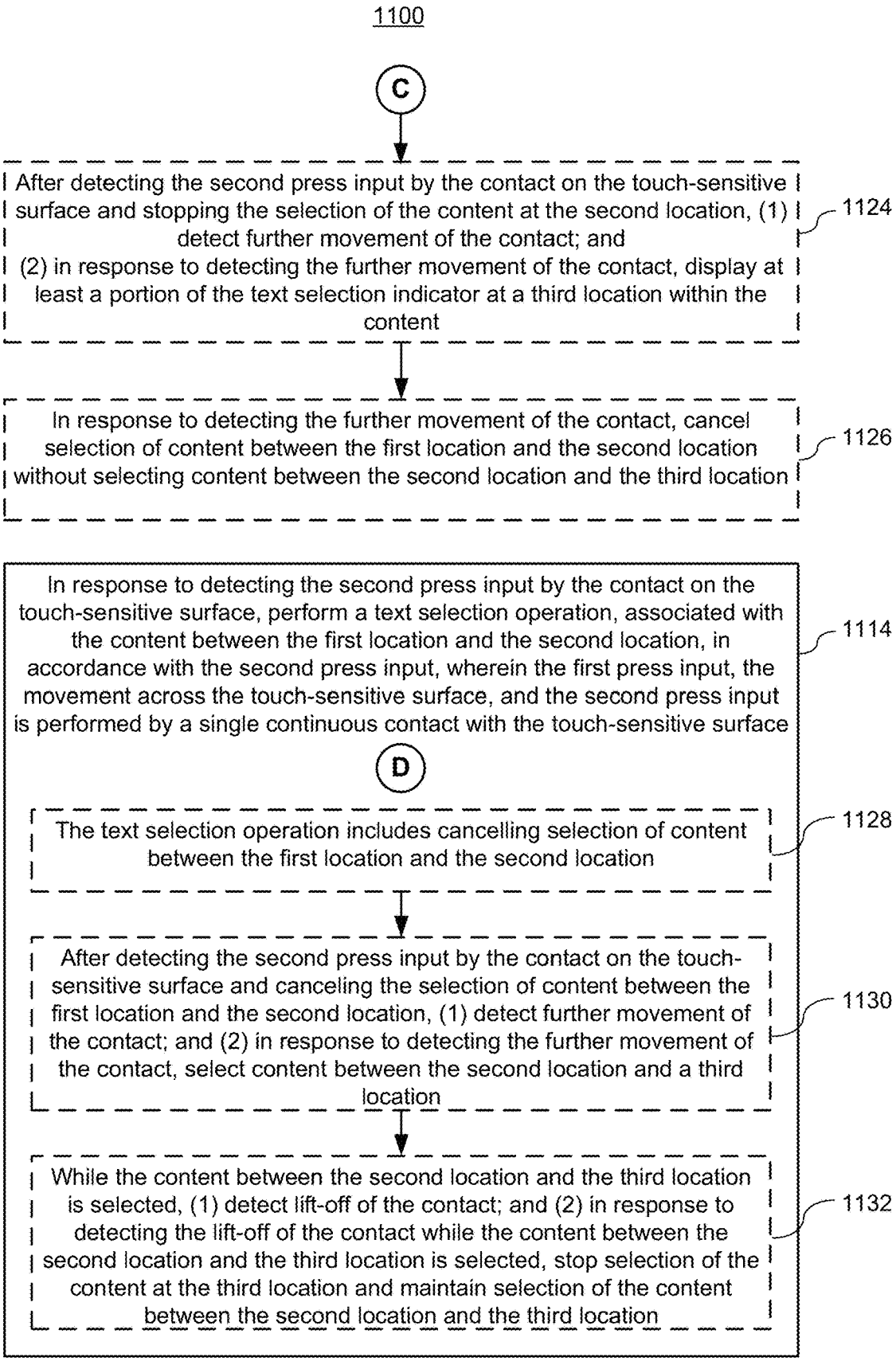

1100
C
After detecting the second press input by the contact on the touch-sensitive surface and stopping the selection of the content at the second location, (1) detect further movement of the contact; and (2) in response to detecting the further movement of the contact, display at least a portion of the text selection indicator at a third location within the content
1124
In response to detecting the further movement of the contact, cancel selection of content between the first location and the second location without selecting content between the second location and the third location
1126
In response to detecting the second press input by the contact on the touch-sensitive surface, perform a text selection operation, associated with the content between the first location and the second location, in accordance with the second press input, wherein the first press input, the movement across the touch-sensitive surface, and the second press input is performed by a single continuous contact with the touch-sensitive surface
1114
D
The text selection operation includes cancelling selection of content between the first location and the second location
1128
After detecting the second press input by the contact on the touch-sensitive surface and canceling the selection of content between the first location and the second location, (1) detect further movement of the contact; and (2) in response to detecting the further movement of the contact, select content between the second location and a third location
1130
While the content between the second location and the third location is selected, (1) detect lift-off of the contact; and (2) in response to detecting the lift-off of the contact while the content between the second location and the third location is selected, stop selection of the content at the third location and maintain selection of the content between the second location and the third location
1132

Figure 11C

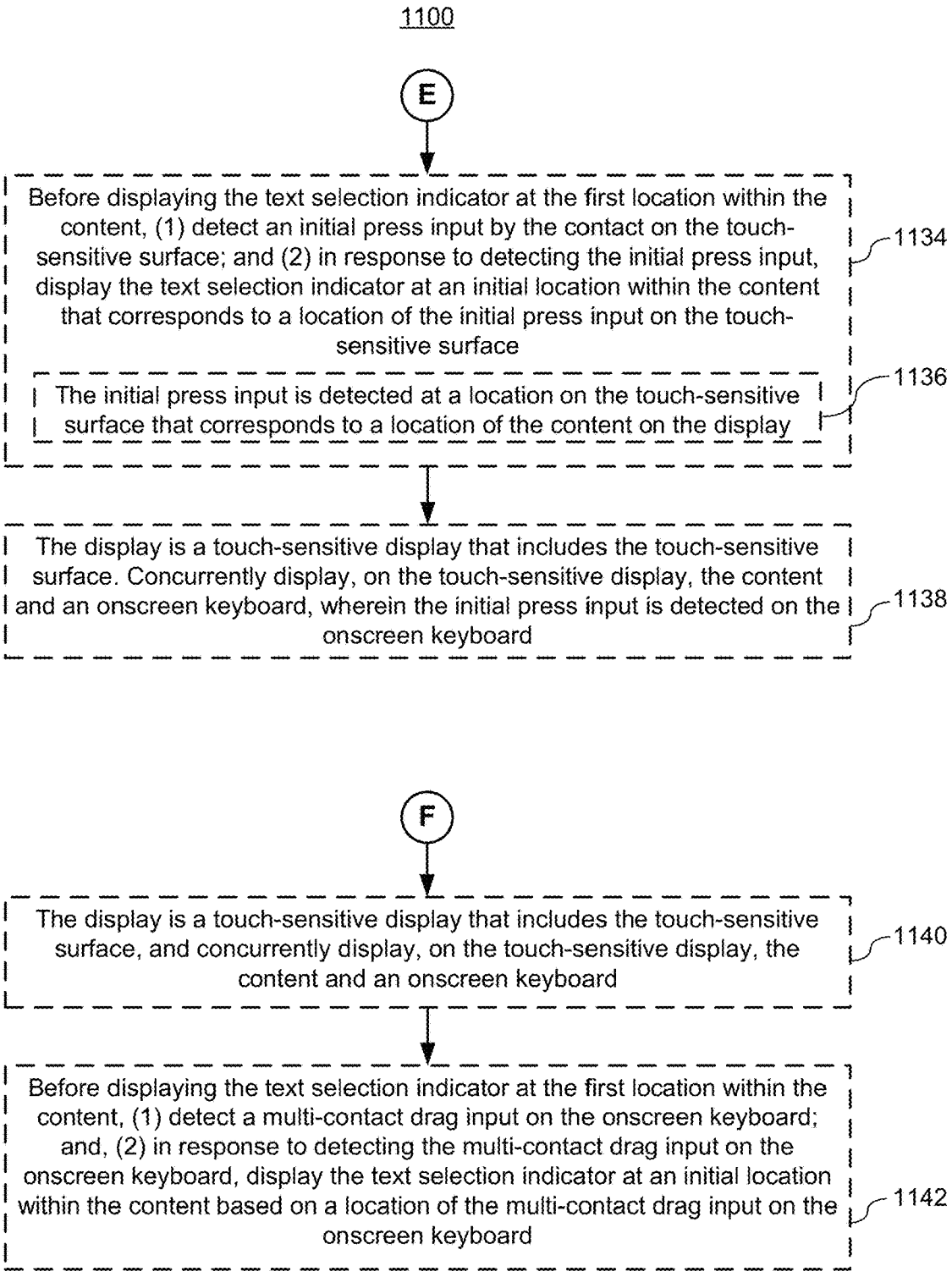

1100
E
Before displaying the text selection indicator at the first location within the content, (1) detect an initial press input by the contact on the touch-sensitive surface; and (2) in response to detecting the initial press input, display the text selection indicator at an initial location within the content that corresponds to a location of the initial press input on the touch-sensitive surface
1134
The initial press input is detected at a location on the touch-sensitive surface that corresponds to a location of the content on the display
1136
The display is a touch-sensitive display that includes the touch-sensitive surface. Concurrently display, on the touch-sensitive display, the content and an onscreen keyboard, wherein the initial press input is detected on the onscreen keyboard
1138
F
The display is a touch-sensitive display that includes the touch-sensitive surface, and concurrently display, on the touch-sensitive display, the content and an onscreen keyboard
1140
Before displaying the text selection indicator at the first location within the content, (1) detect a multi-contact drag input on the onscreen keyboard; and, (2) in response to detecting the multi-contact drag input on the onscreen keyboard, display the text selection indicator at an initial location within the content based on a location of the multi-contact drag input on the onscreen keyboard
1142

Figure 11D

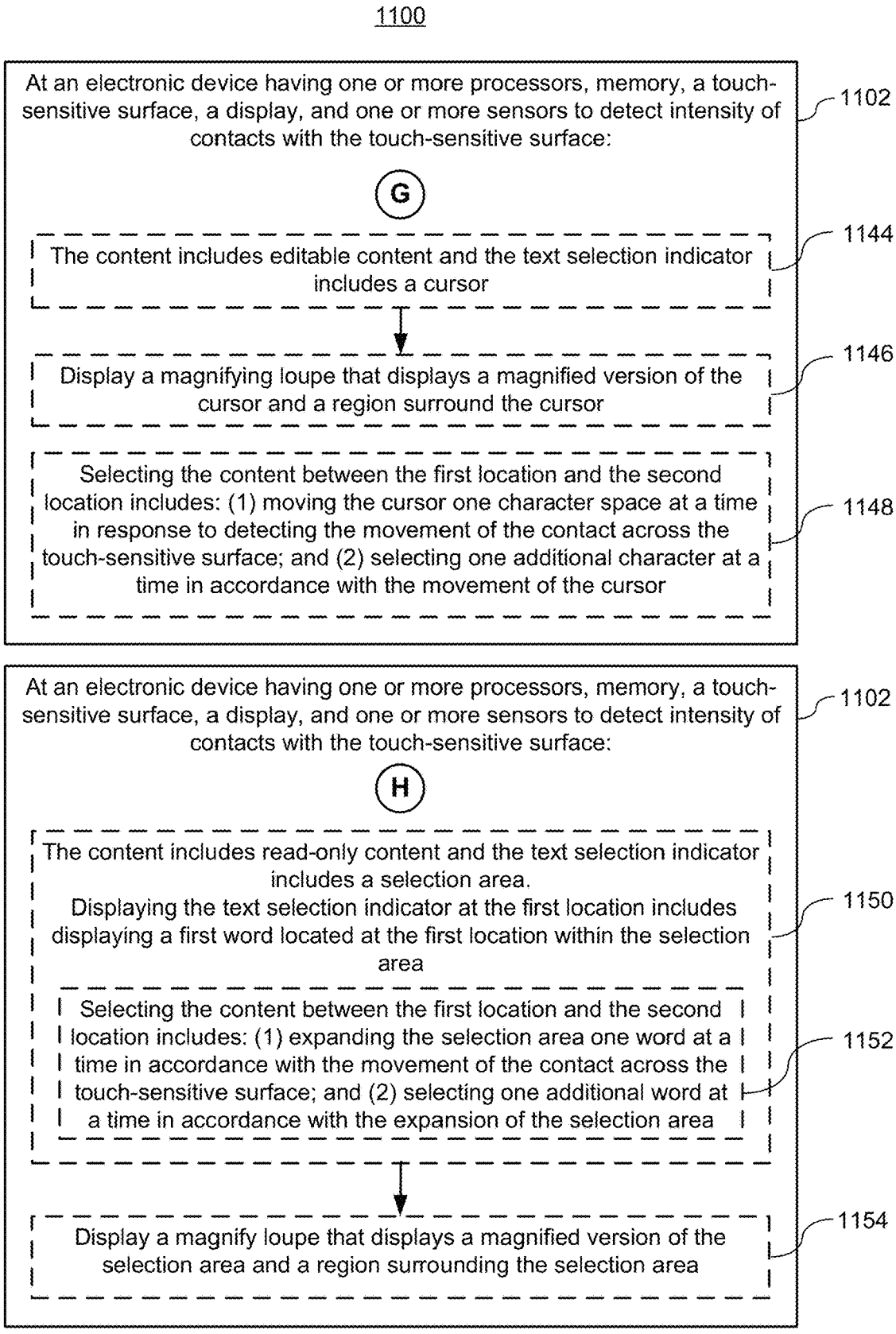

1100
At an electronic device having one or more processors, memory, a touch-sensitive surface, a display, and one or more sensors to detect intensity of contacts with the touch-sensitive surface:
1102
G
The content includes editable content and the text selection indicator includes a cursor
1144
Display a magnifying loupe that displays a magnified version of the cursor and a region surround the cursor
1146
Selecting the content between the first location and the second location includes: (1) moving the cursor one character space at a time in response to detecting the movement of the contact across the touch-sensitive surface; and (2) selecting one additional character at a time in accordance with the movement of the cursor
1148
At an electronic device having one or more processors, memory, a touch-sensitive surface, a display, and one or more sensors to detect intensity of contacts with the touch-sensitive surface:
1102
H
The content includes read-only content and the text selection indicator includes a selection area.
Displaying the text selection indicator at the first location includes displaying a first word located at the first location within the selection area
1150
Selecting the content between the first location and the second location includes: (1) expanding the selection area one word at a time in accordance with the movement of the contact across the touch-sensitive surface; and (2) selecting one additional word at a time in accordance with the expansion of the selection area
1152
Display a magnify loupe that displays a magnified version of the selection area and a region surrounding the selection area
1154

Figure 11E

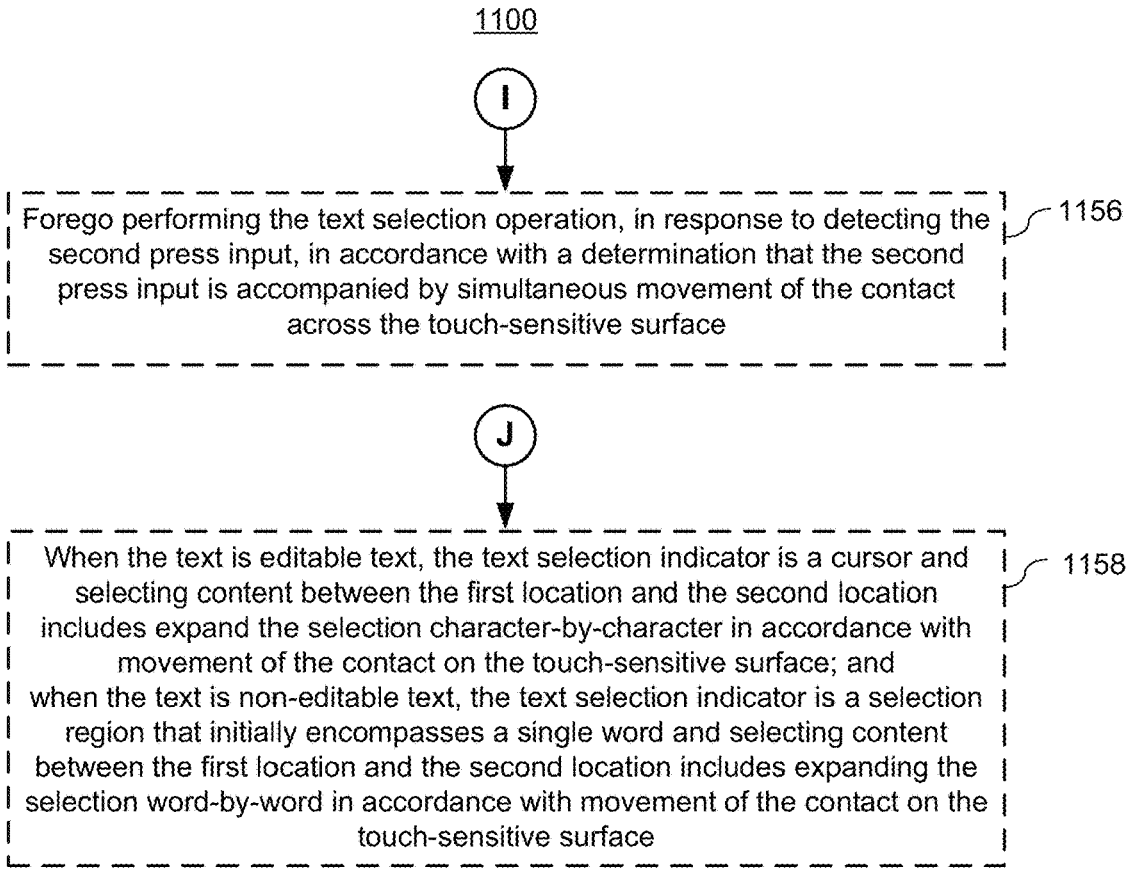

1100
I
Forego performing the text selection operation, in response to detecting the second press input, in accordance with a determination that the second press input is accompanied by simultaneous movement of the contact across the touch-sensitive surface
1156
J
When the text is editable text, the text selection indicator is a cursor and selecting content between the first location and the second location includes expand the selection character-by-character in accordance with movement of the contact on the touch-sensitive surface; and
when the text is non-editable text, the text selection indicator is a selection region that initially encompasses a single word and selecting content between the first location and the second location includes expanding the selection word-by-word in accordance with movement of the contact on the touch-sensitive surface
1158

Figure 11F

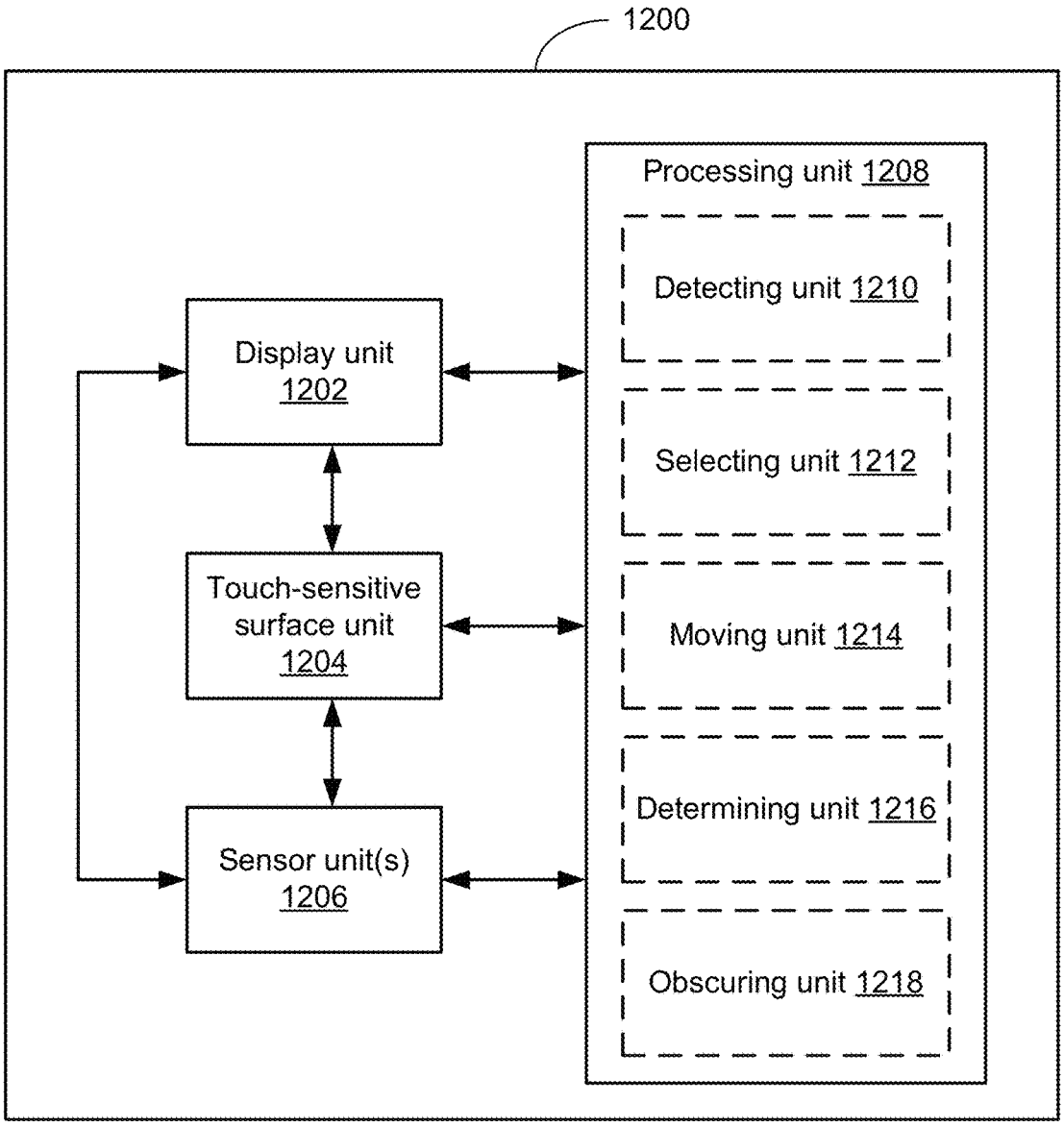
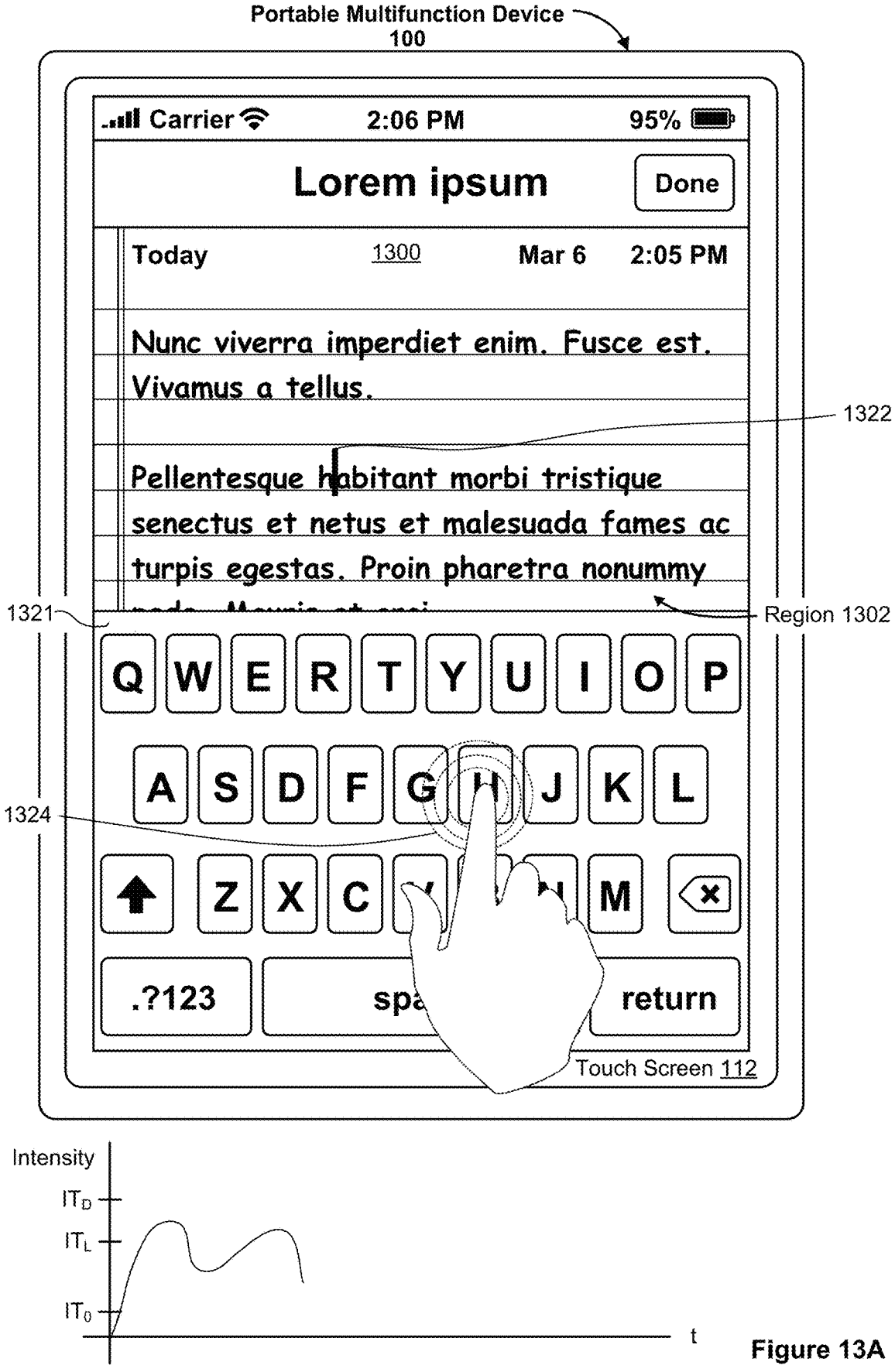

1200
Processing unit 1208
Detecting unit 1210
Selecting unit 1212
Moving unit 1214
Determining unit 1216
Obscuring unit 1218
Display unit 1202
Touch-sensitive surface unit 1204
Sensor unit(s) 1206

Figure 12


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Lorem ipsum
Done
Today
1300
Mar 6
2:05 PM
Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
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1321
Region 1302
1324
Q W E R T Y U I O P
A S D F G H J K L
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.?123
return
Touch Screen 112
Intensity
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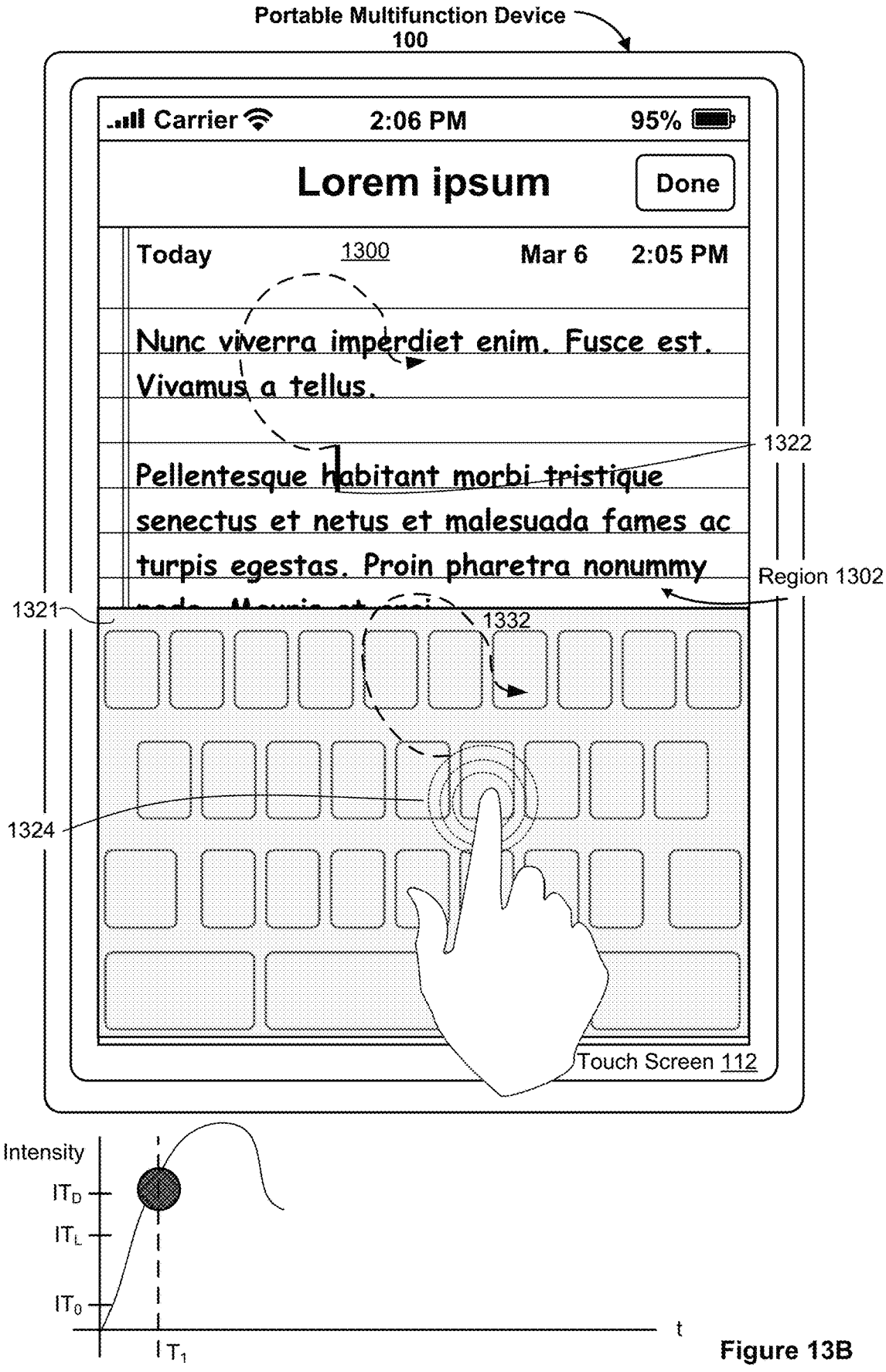
Figure 13A


Portable Multifunction Device
100
Carrier
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Done
Today
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Mar 6
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Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
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Touch Screen 112
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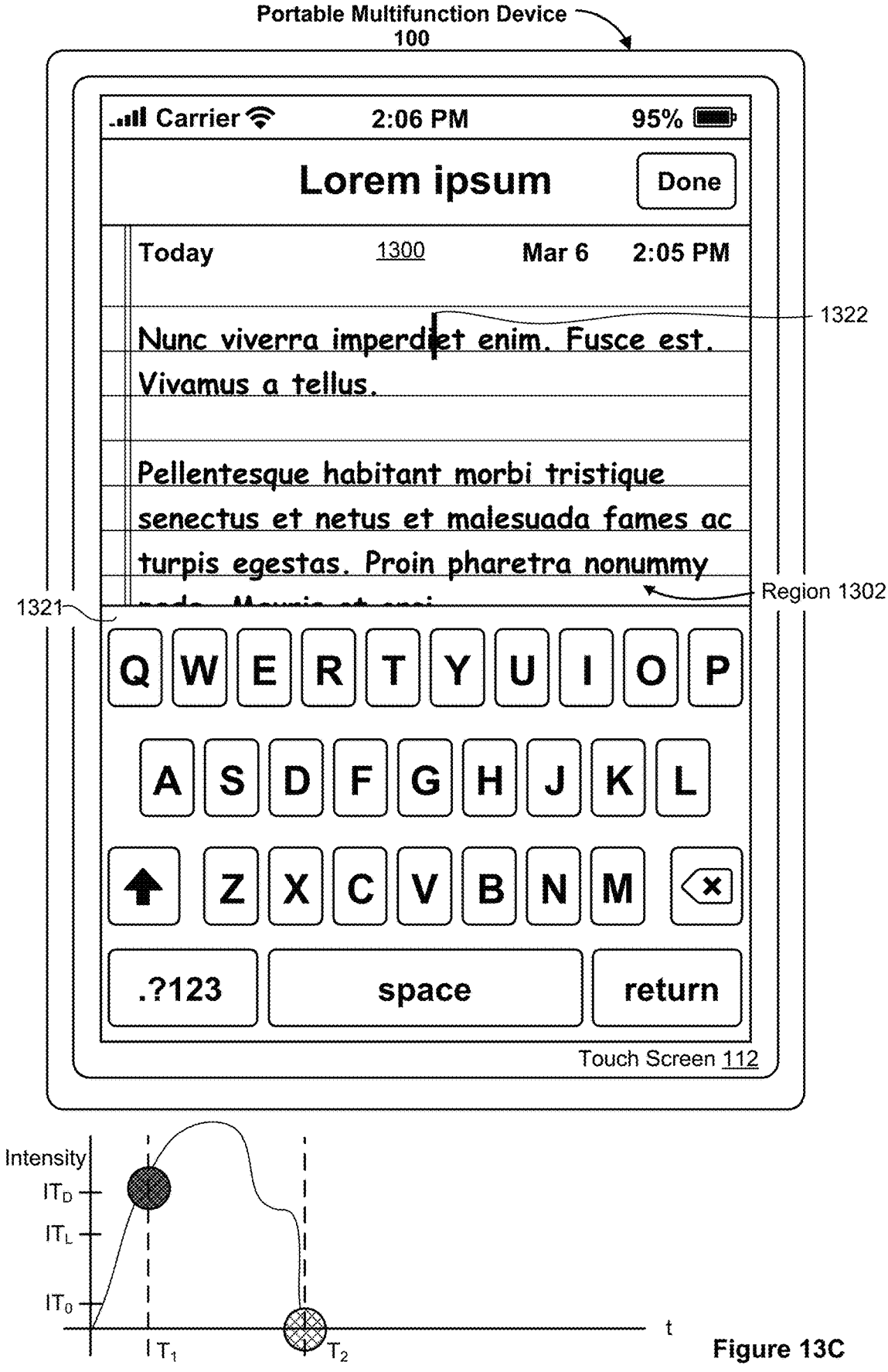
Figure 13B


Portable Multifunction Device
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Lorem ipsum
Done
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1322
Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
Region 1302
1321
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
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return
Touch Screen 112
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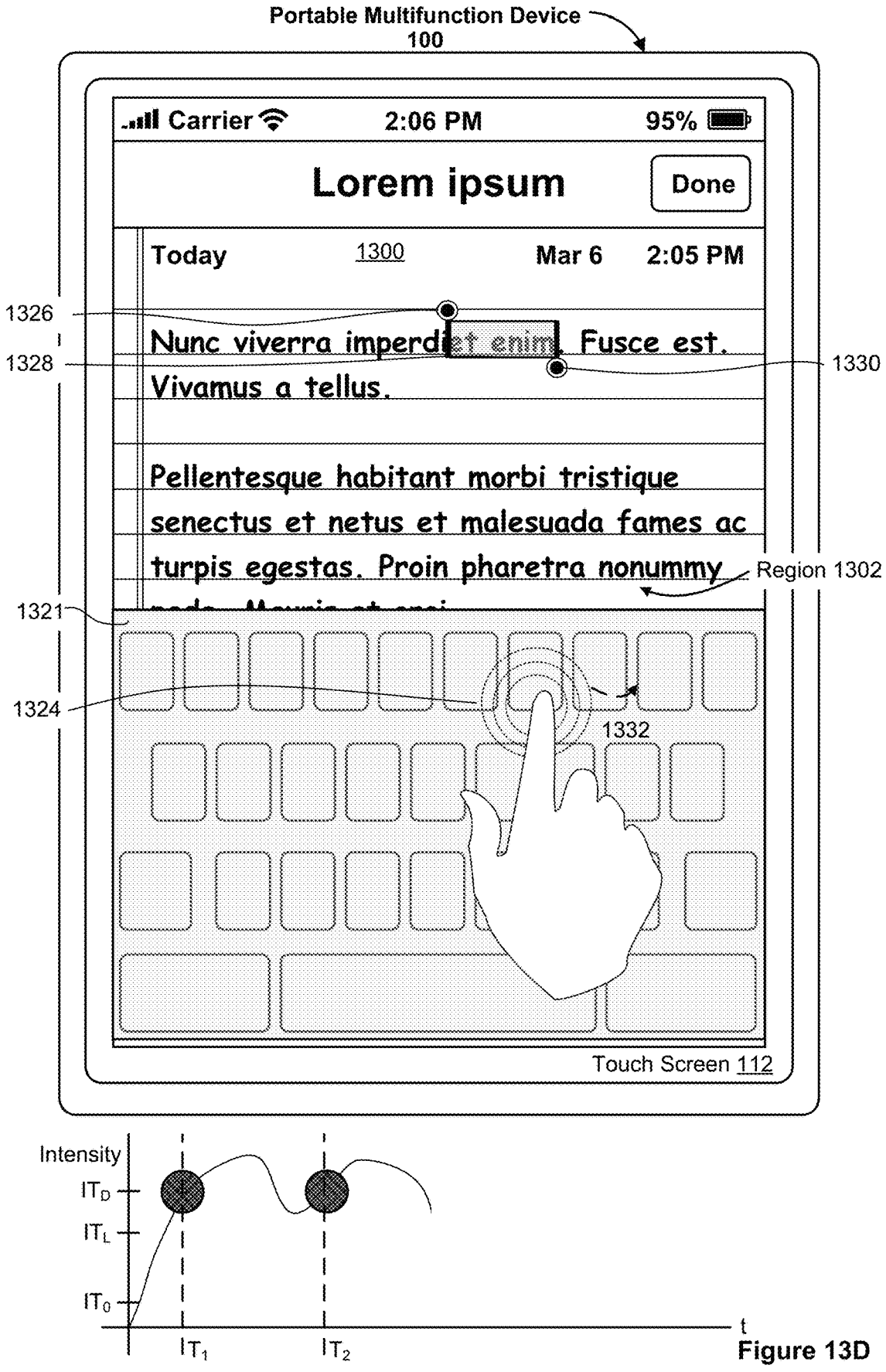
Figure 13C


Portable Multifunction Device
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Lorem ipsum
Done
Today
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Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
Region 1302
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Touch Screen 112
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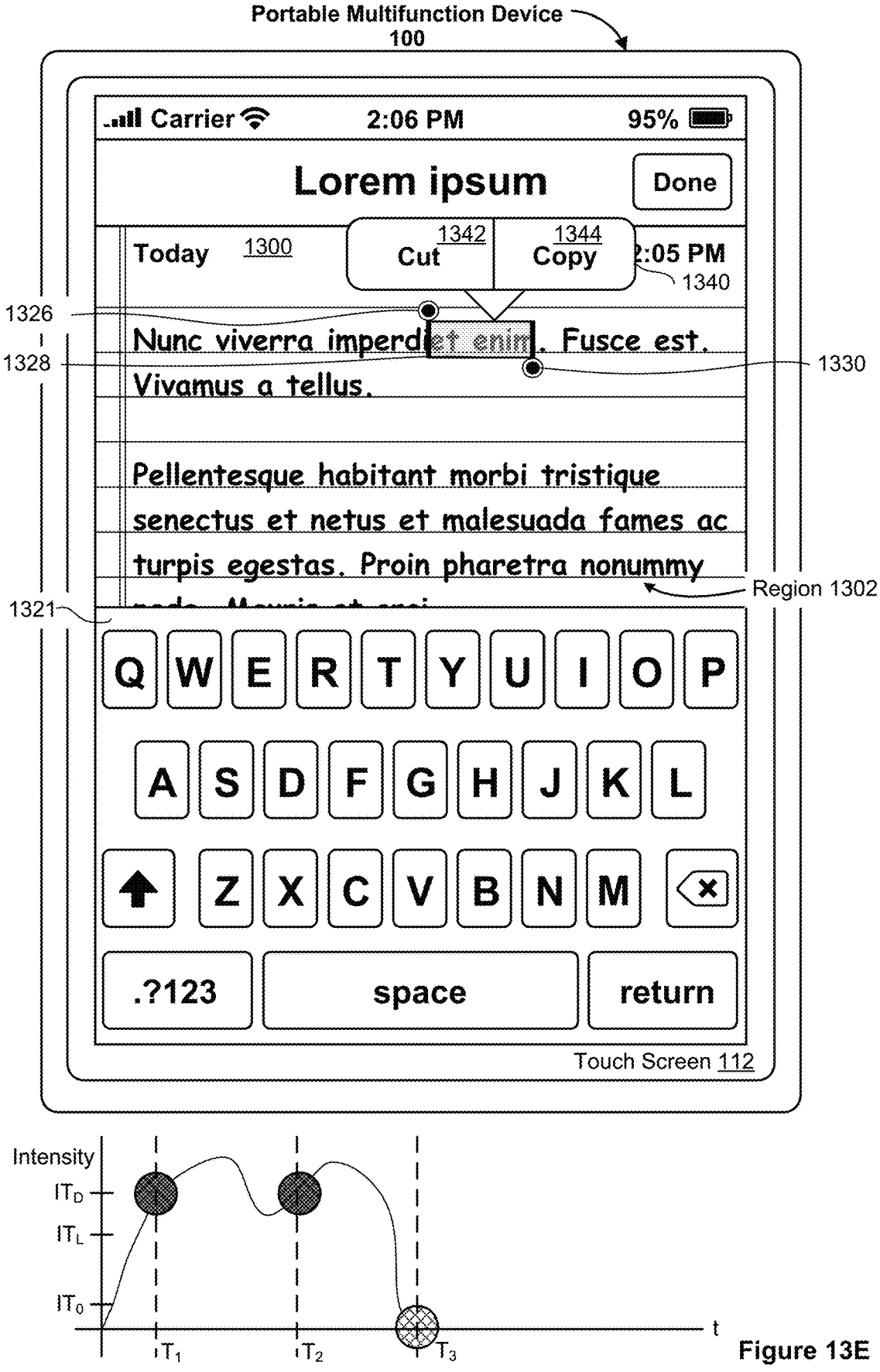
Figure 13D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Nunc viverra imperdiet enim. Fusce est.
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Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
Region 1302
1321
Q W E R T Y U I O P
A S D F G H J K L
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.?123
space
return
Touch Screen 112
Intensity
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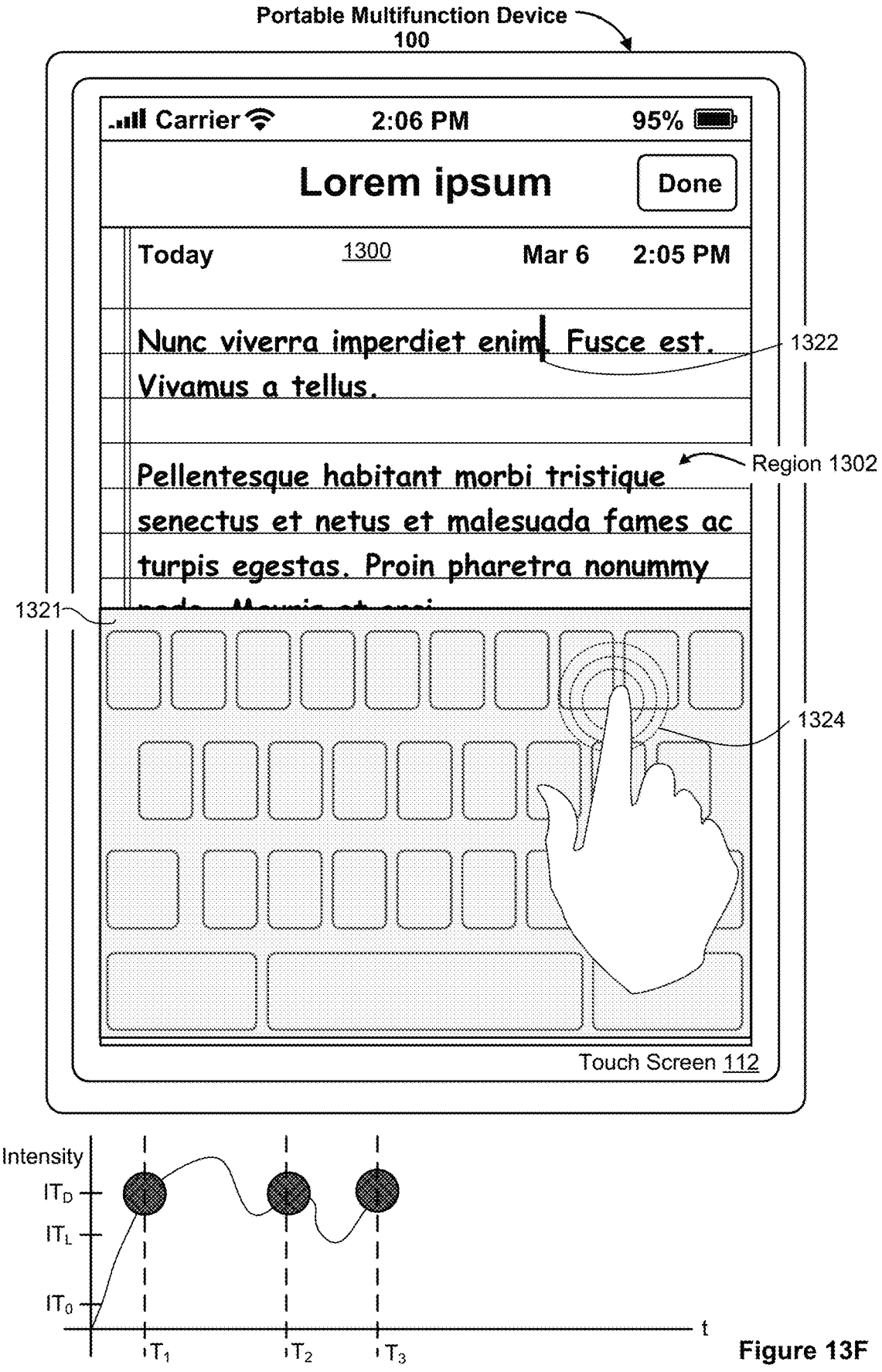
Figure 13E


Portable Multifunction Device
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2:05 PM
Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
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Pellentesque habitant morbi tristique
Region 1302
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
1321
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Touch Screen 112
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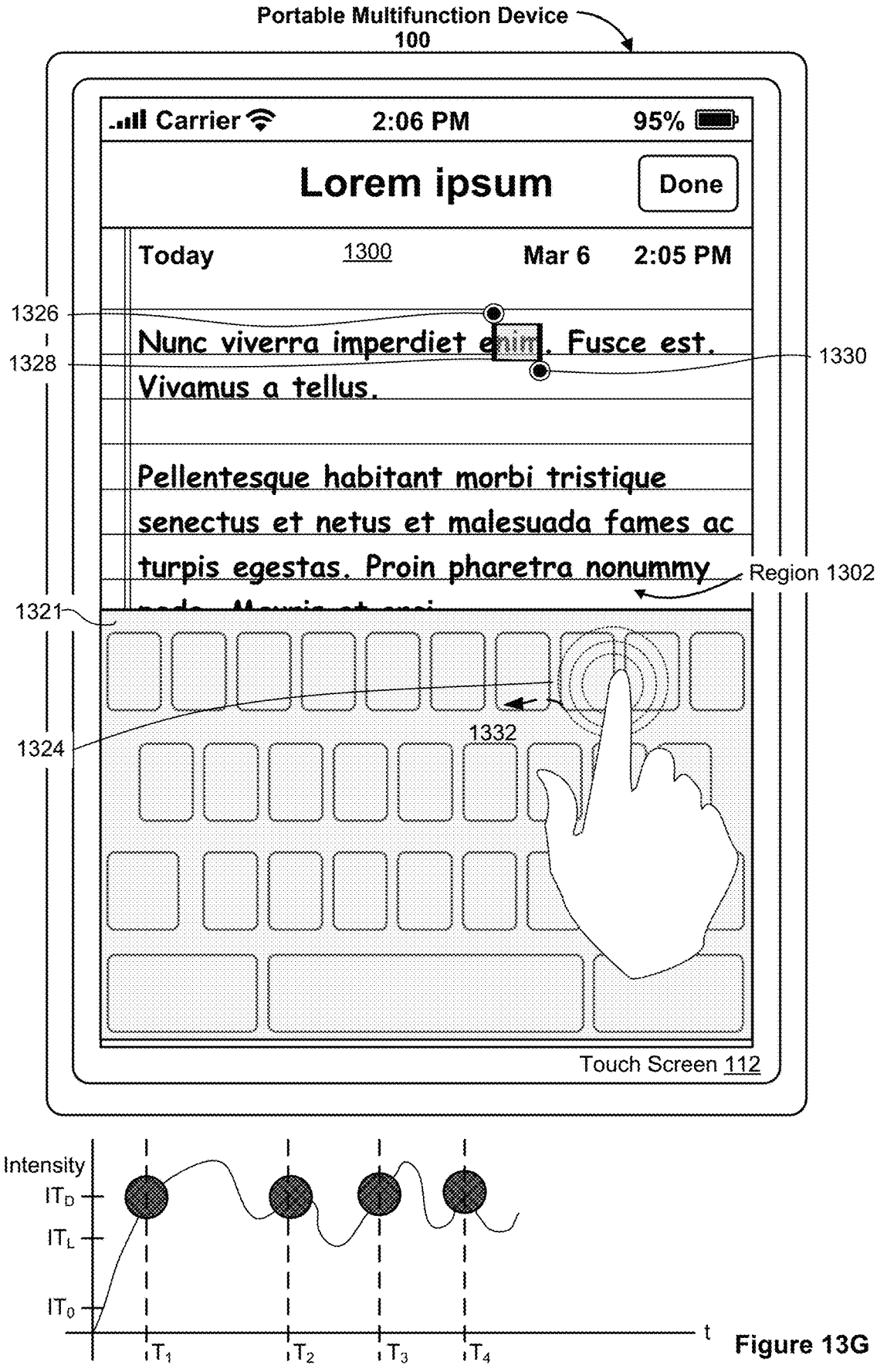
Figure 13F


Portable Multifunction Device
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Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
Region 1302
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Touch Screen 112
Intensity
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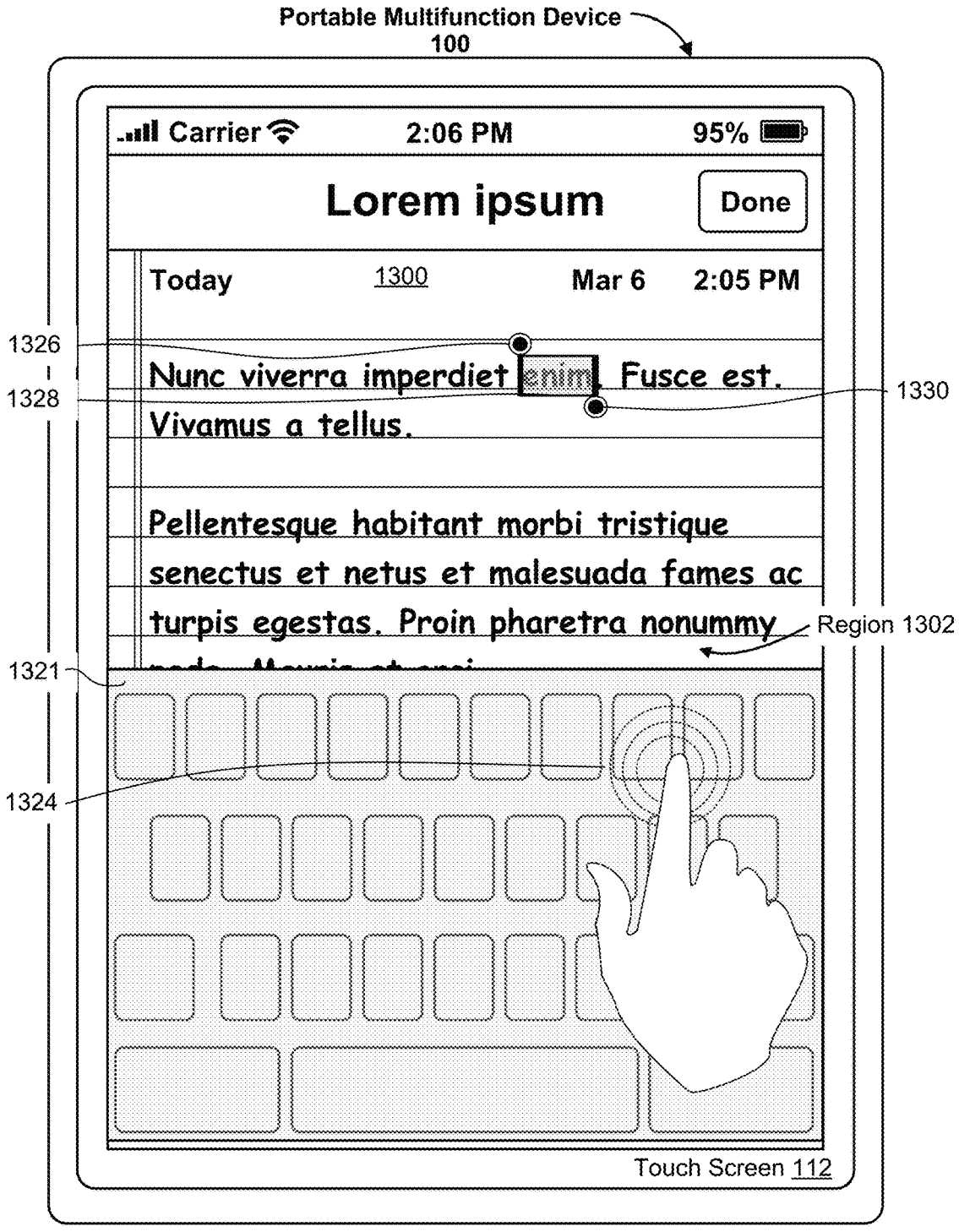
Figure 13G


Portable Multifunction Device
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Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
Region 1302
1321
1324
Touch Screen 112

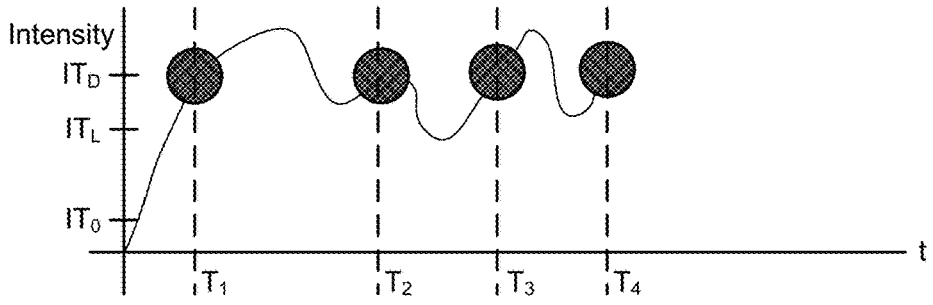
Intensity
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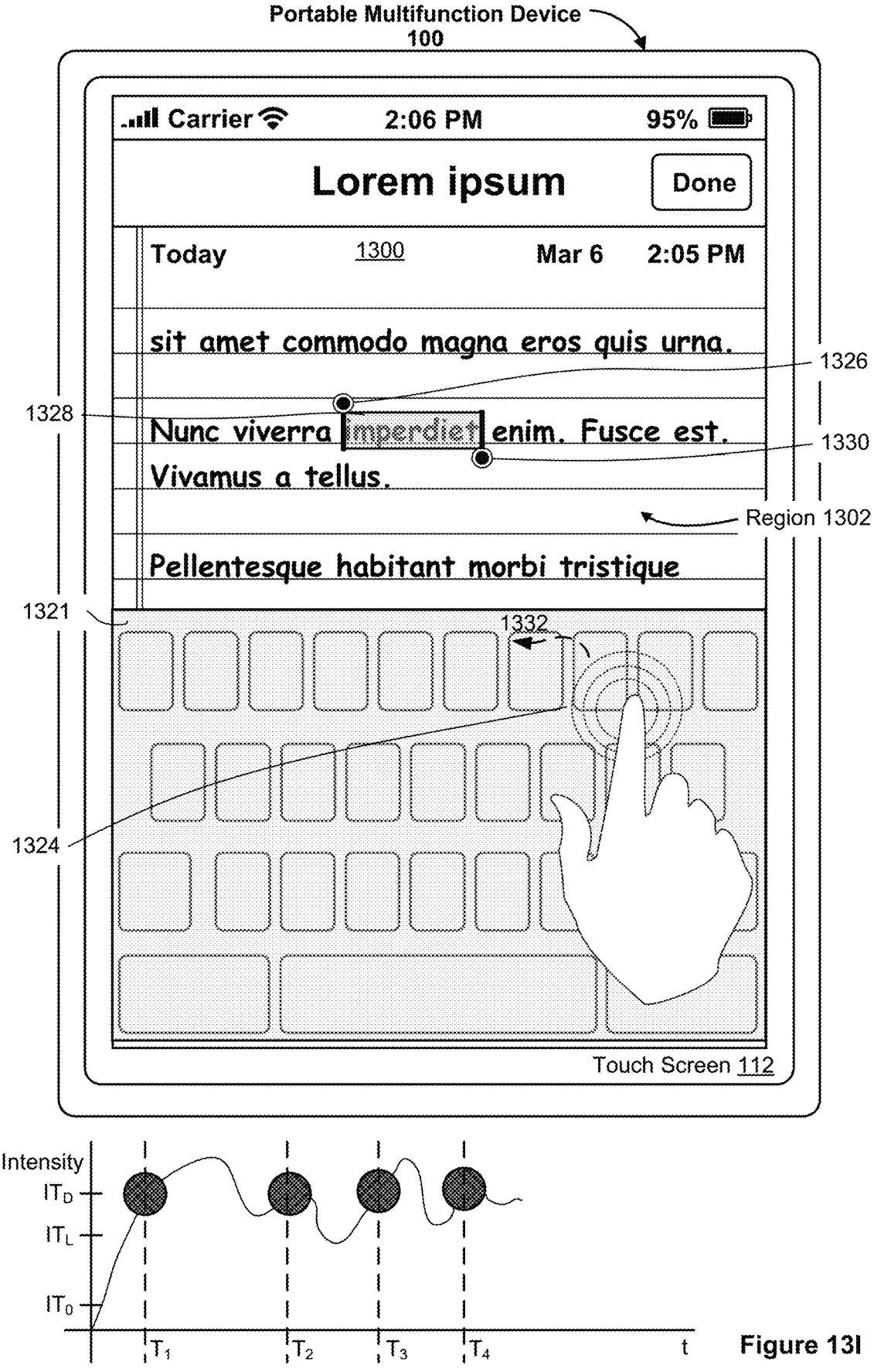
Figure 13H


Portable Multifunction Device
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Carrier
2:06 PM
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Lorem ipsum
Done
Today
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Mar 6
2:05 PM
sit amet commodo magna eros quis urna.
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Nunc viverra imperdiet enim. Fusce est.
1330
Vivamus a tellus.
Region 1302
Pellentesque habitant morbi tristique
1321
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1324
Touch Screen 112
Intensity
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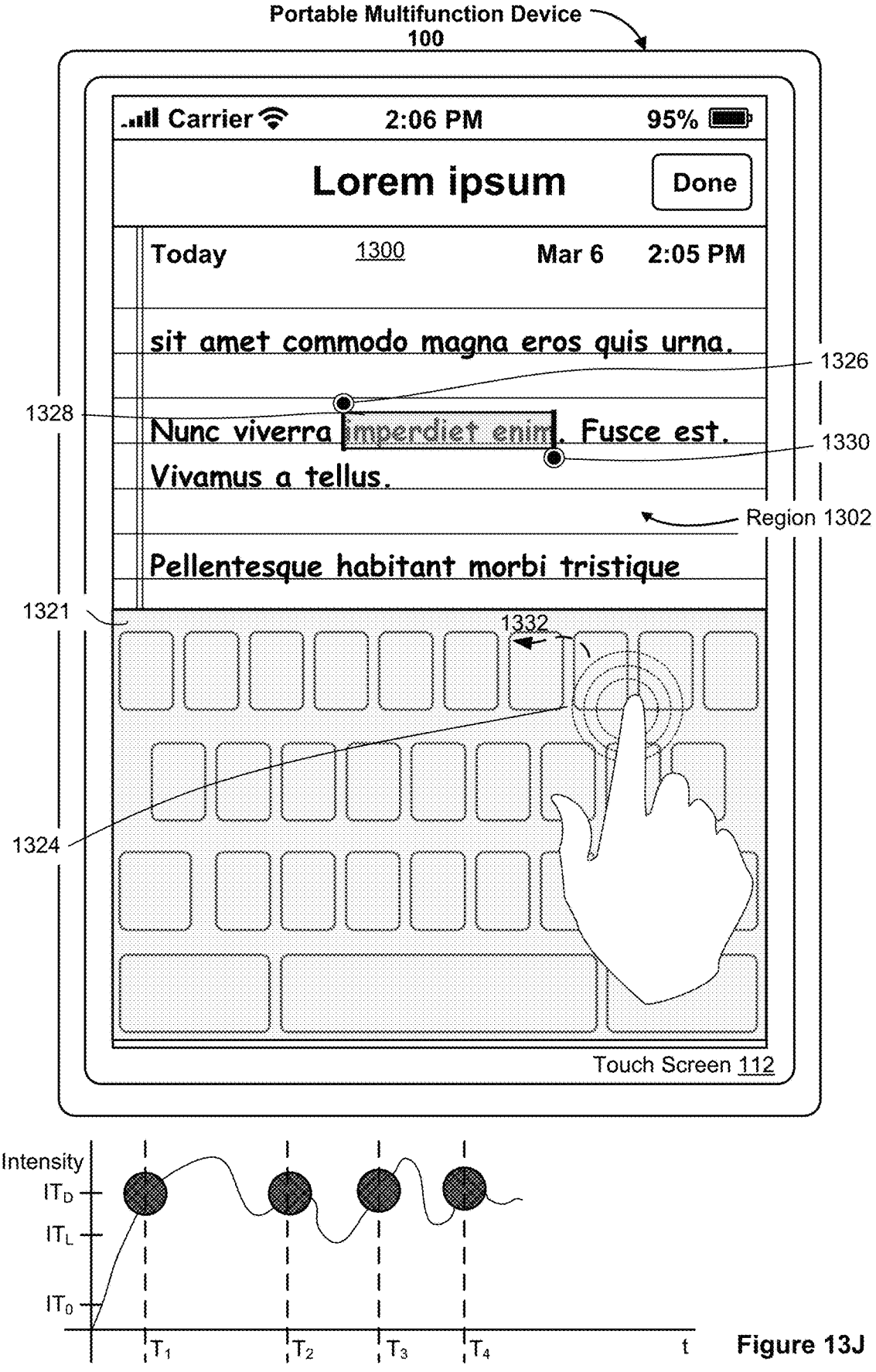
Figure 13I


Portable Multifunction Device
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Done
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sit amet commodo magna eros quis urna.
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Nunc viverra imperdiet enim. Fusce est.
1330
Vivamus a tellus.
Region 1302
Pellentesque habitant morbi tristique
1321
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1324
Touch Screen 112
Intensity
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T_3
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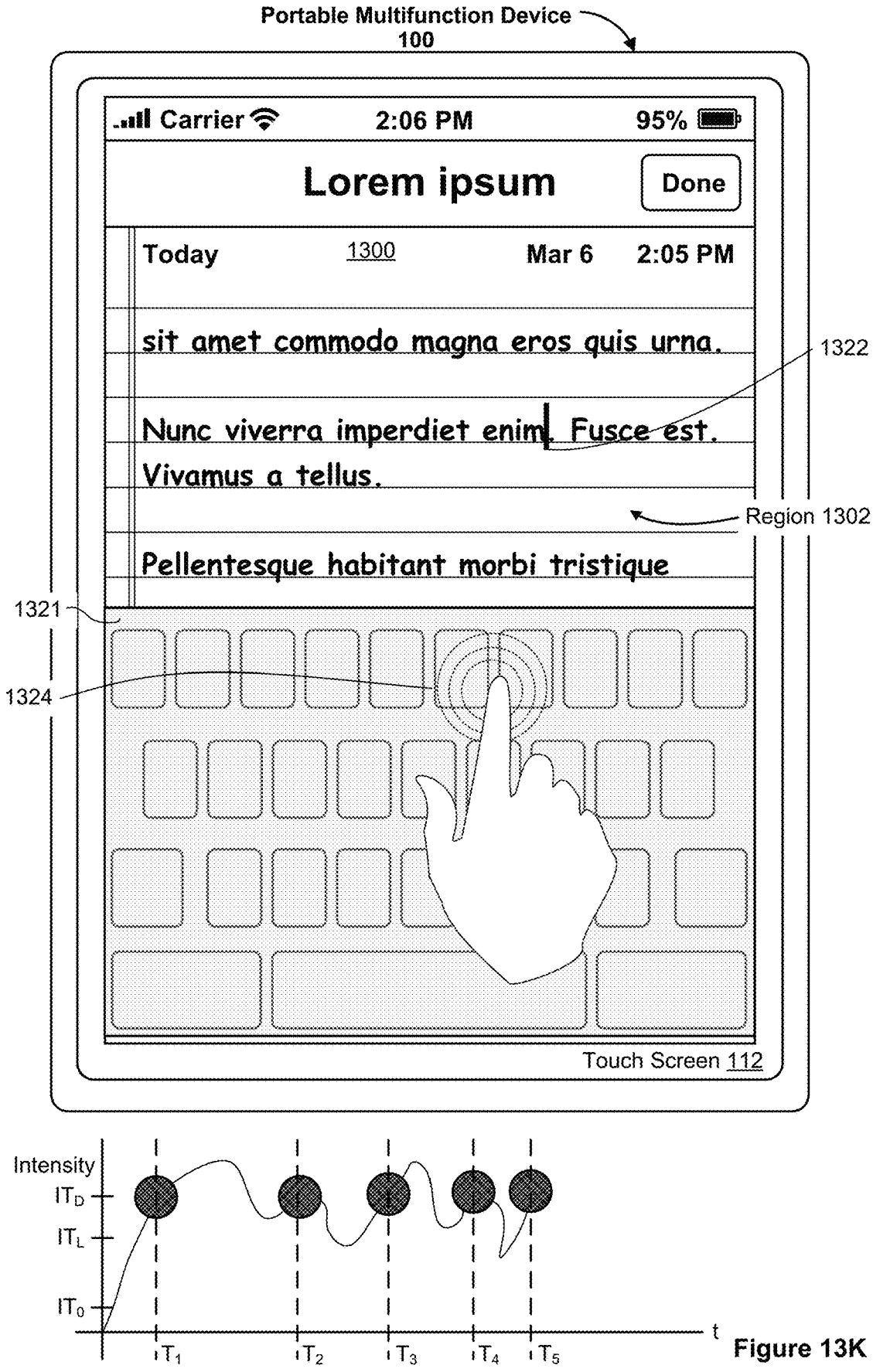
Figure 13J


Portable Multifunction Device
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Done
Today
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2:05 PM
sit amet commodo magna eros quis urna.
Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
1322
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Touch Screen 112
Intensity
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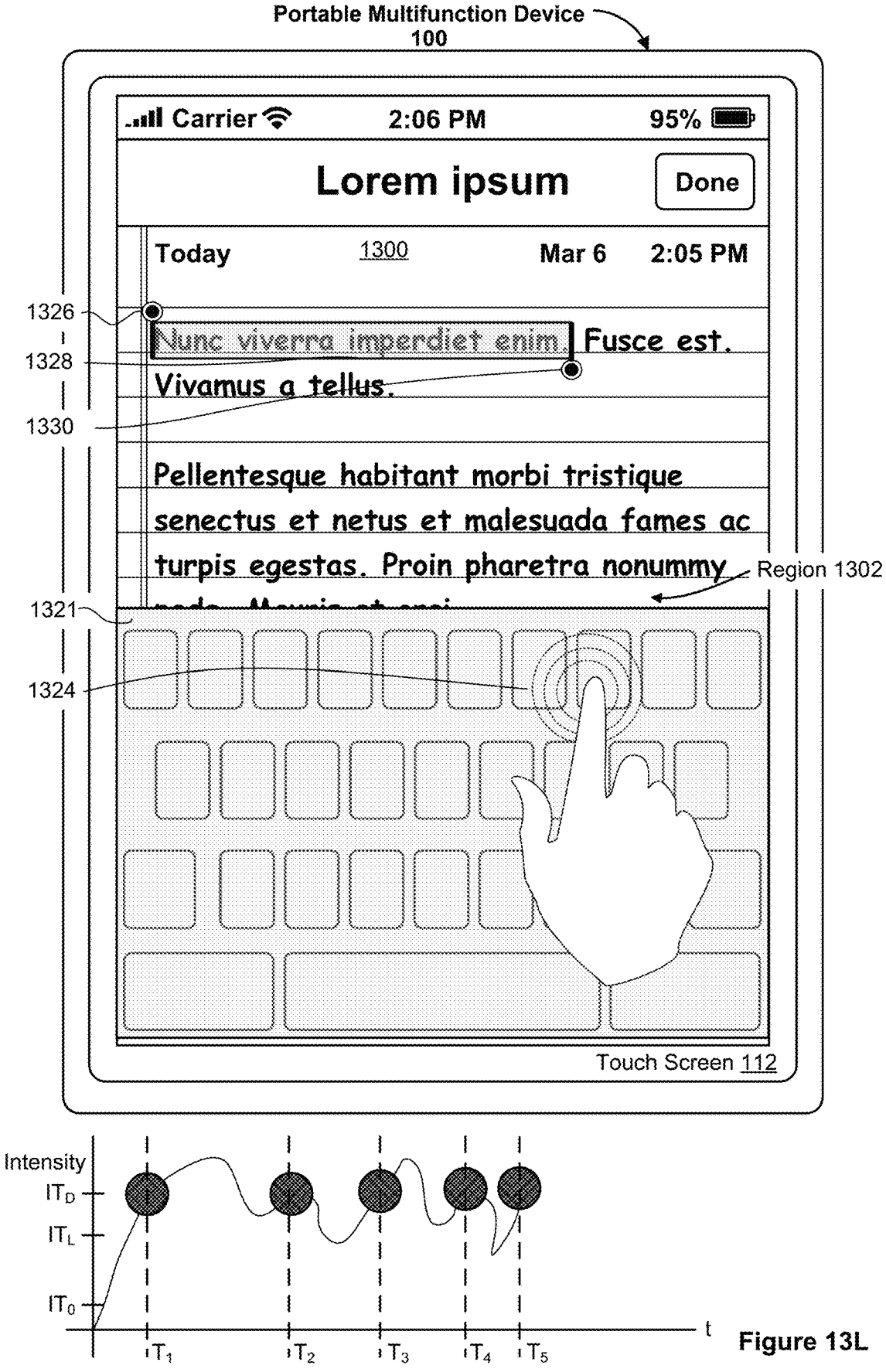
Figure 13K


Portable Multifunction Device
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Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
Region 1302
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Touch Screen 112
Intensity
IT_D
IT_L
IT_0
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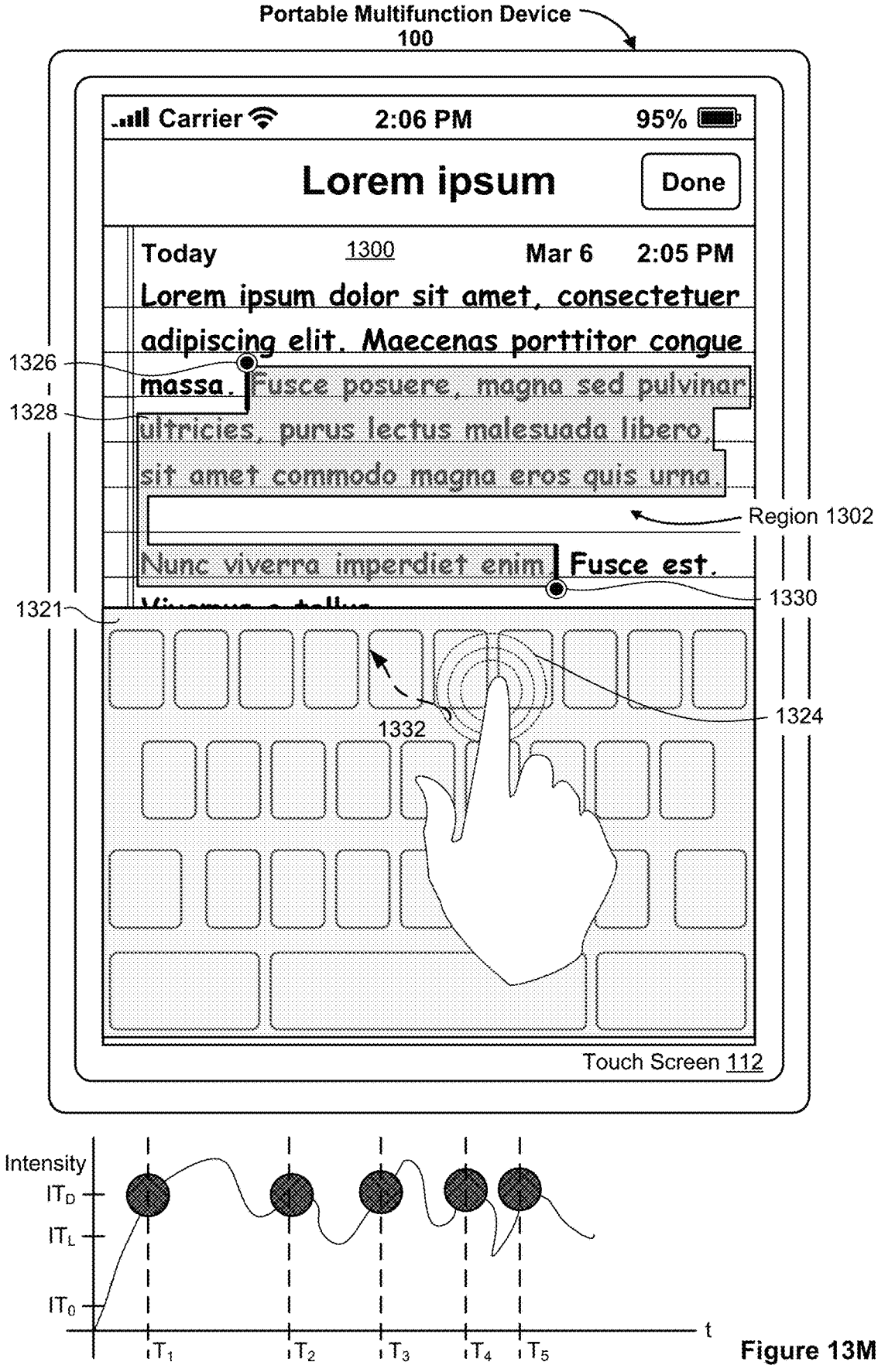
Figure 13L


Portable Multifunction Device
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Mar 6
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Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.
Nunc viverra imperdiet enim. Fusce est.
1326
1328
1321
Region 1302
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1324
1332
Touch Screen 112
Intensity
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IT_0
t
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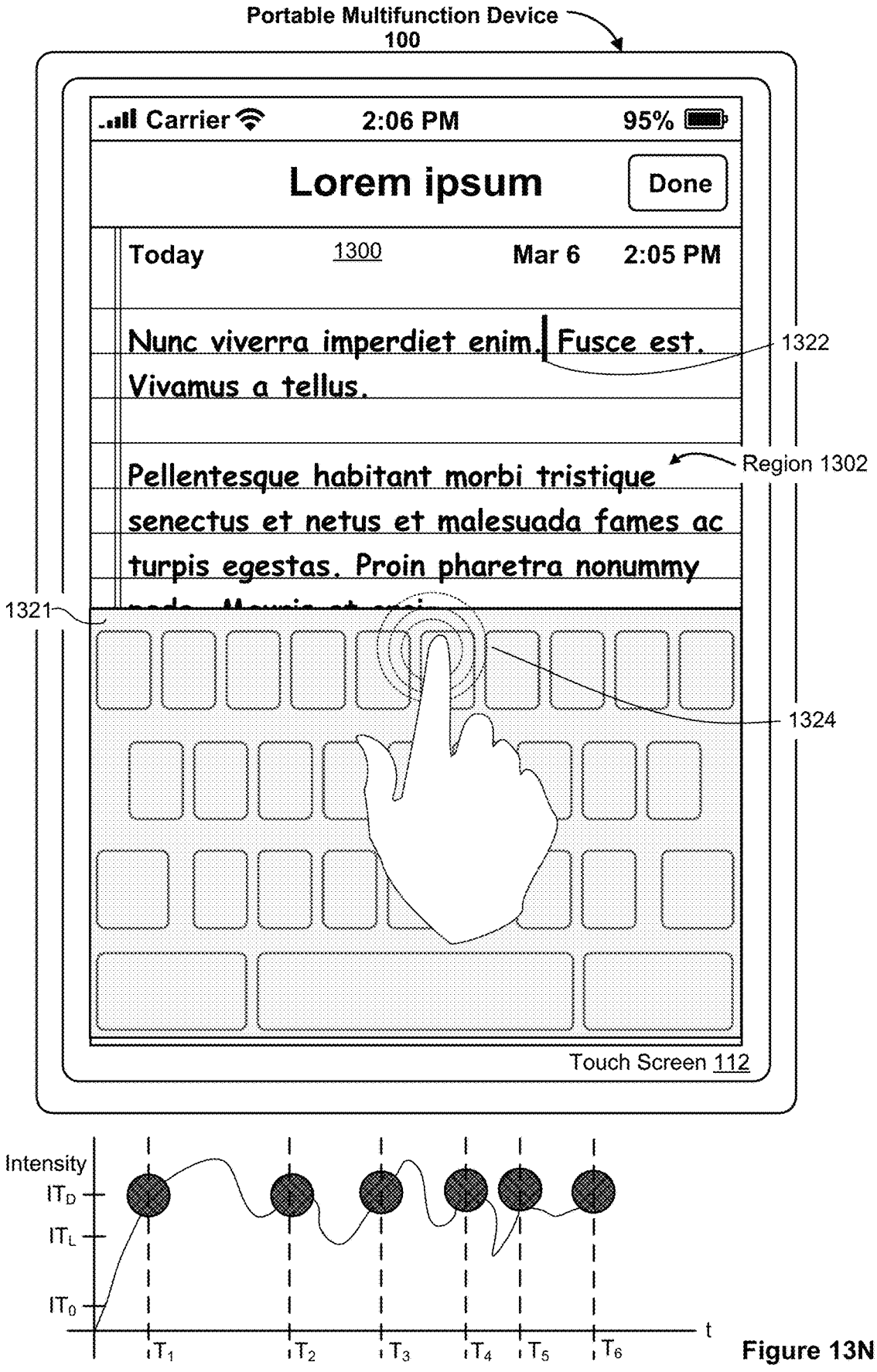
T_2
T_3
T_4
T_5

Figure 13M


Portable Multifunction Device
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Done
Today
1300
Mar 6
2:05 PM
Nunc viverra imperdiet enim. Fusce est.
Vivamus a tellus.
Pellentesque habitant morbi tristique
senectus et netus et malesuada fames ac
turpis egestas. Proin pharetra nonummy
1322
Region 1302
1321
1324
Touch Screen 112
Intensity
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t
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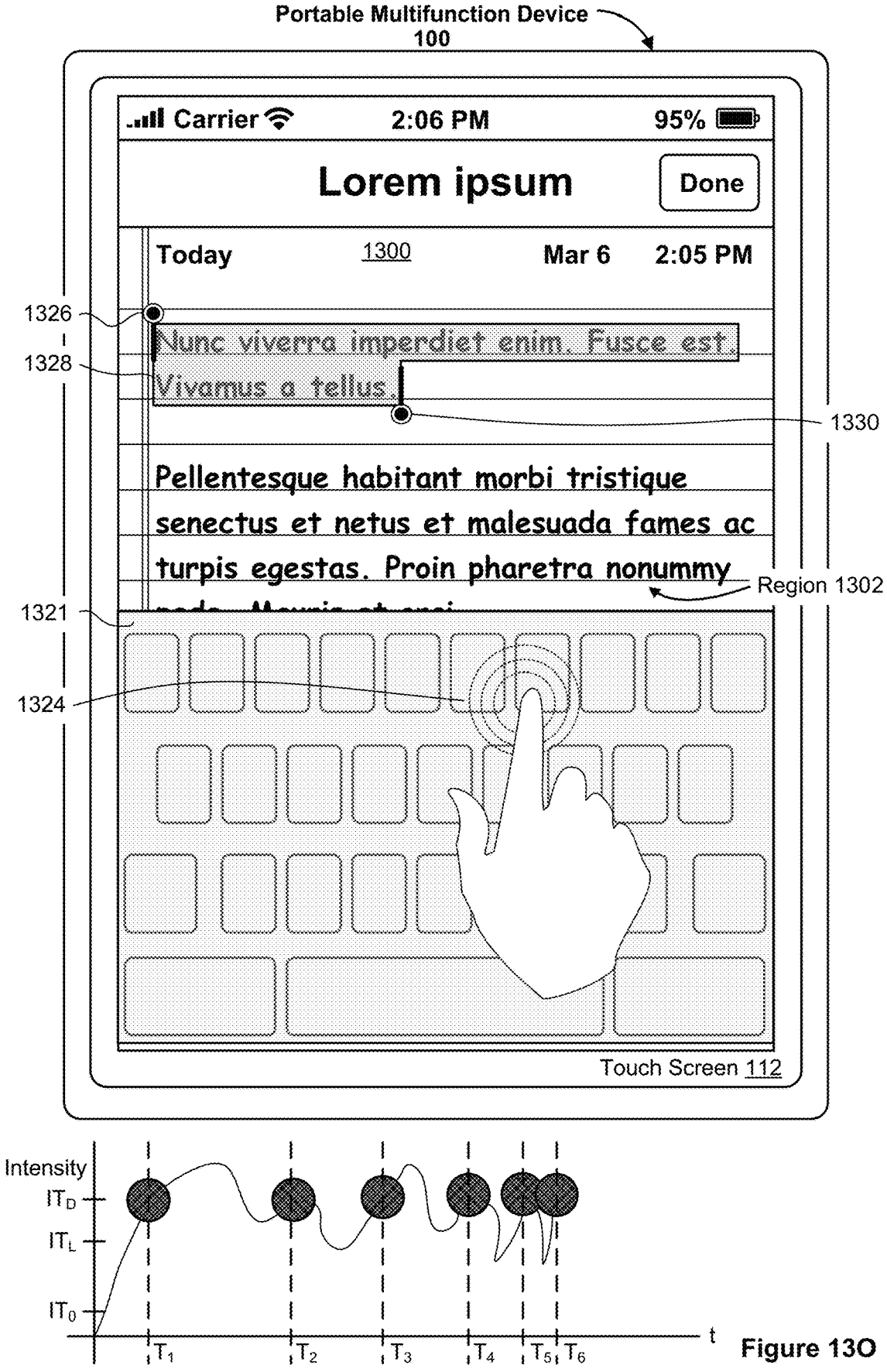
T_6

Figure 13N


Portable Multifunction Device
100
Carrier
2:06 PM
95%
Lorem ipsum
Done
Today
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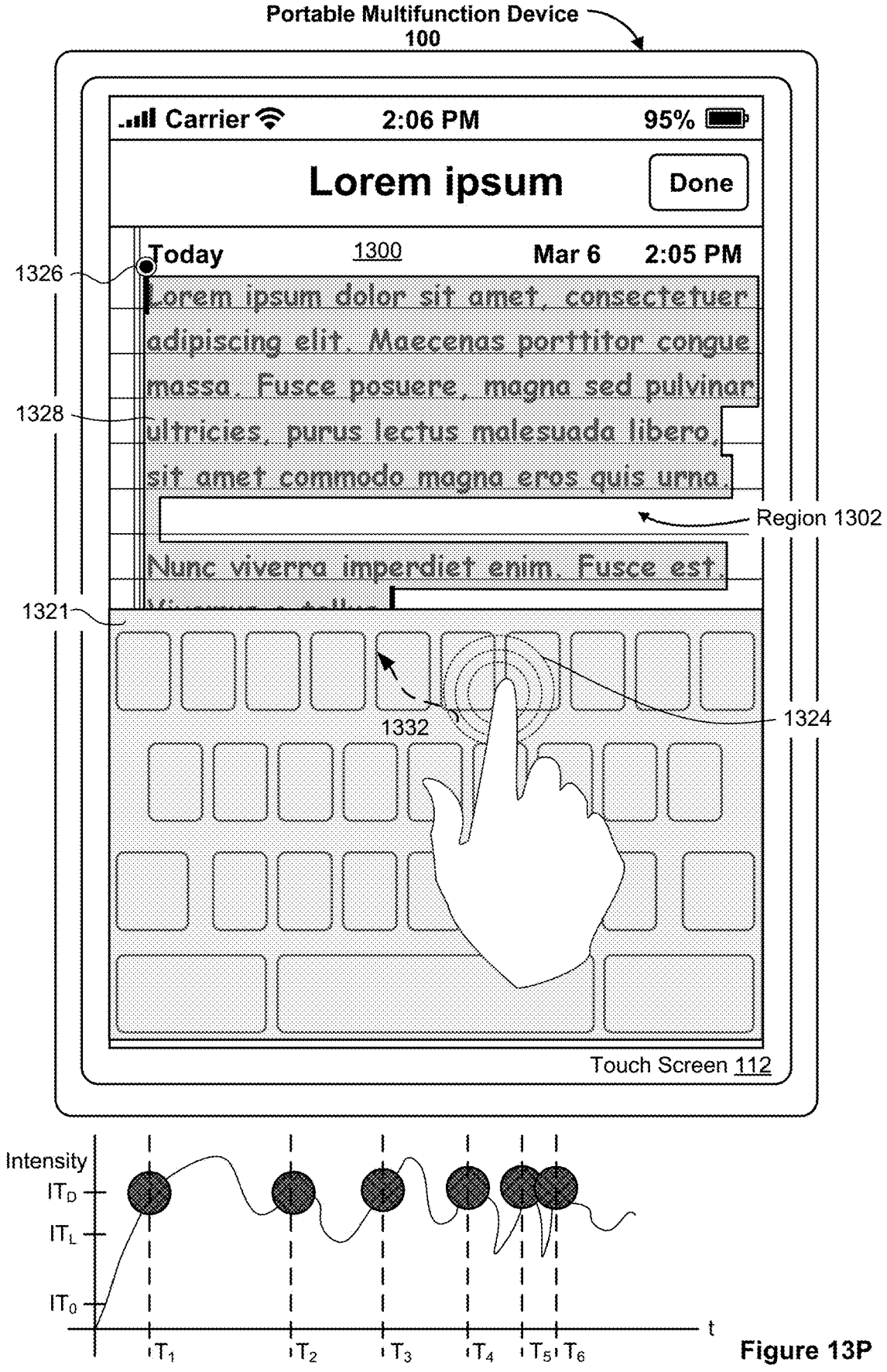
turpis egestas. Proin pharetra nonummy
Region 1302
1321
1324
Touch Screen 112
Intensity
IT_D
IT_L
IT_0
T1
T2
T3
T4
T5
T6
t

Figure 13O


Portable Multifunction Device
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Region 1302
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Touch Screen 112
Intensity
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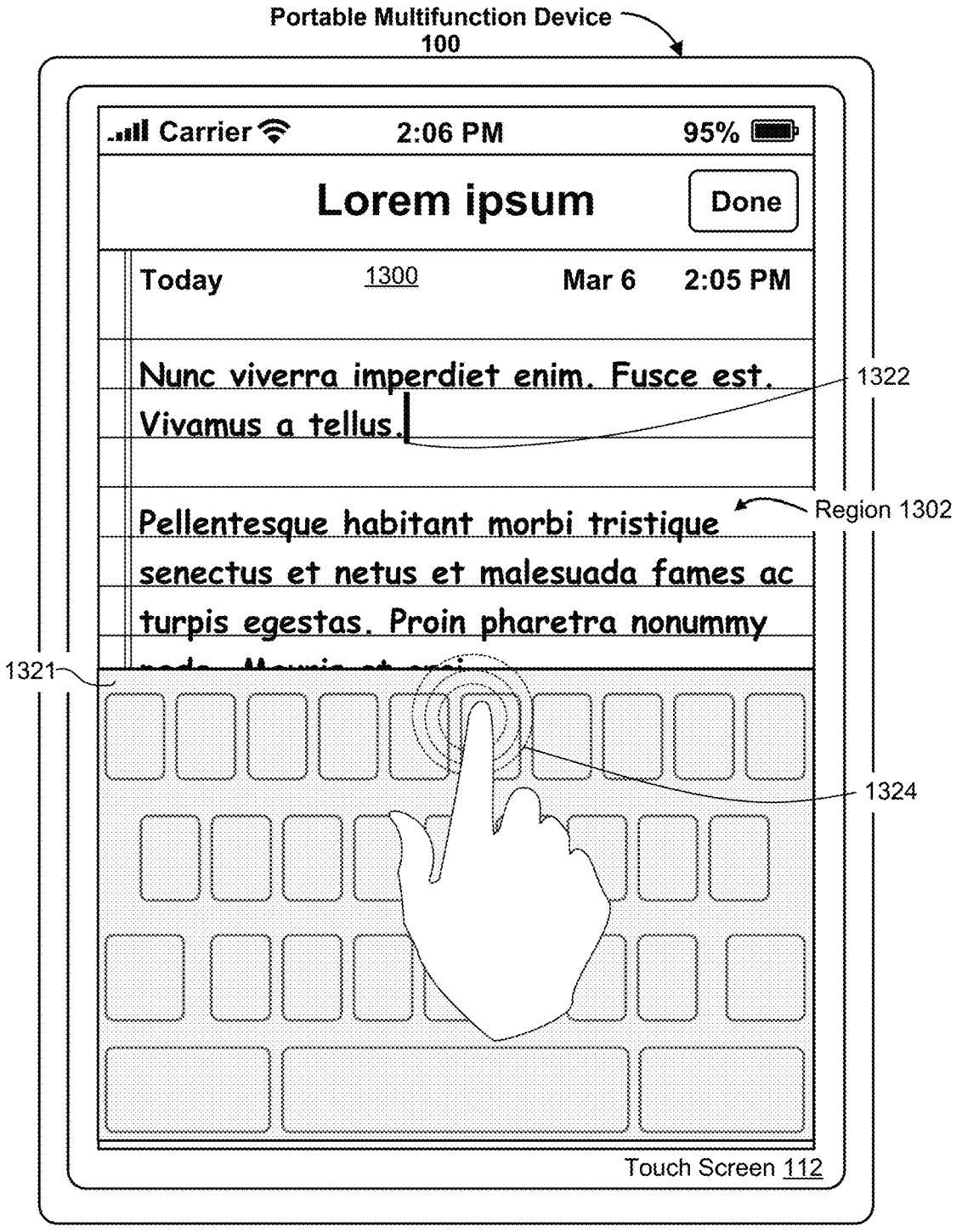
T_1
T_2
T_3
T_4
T_5
T_6

Figure 13P


Portable Multifunction Device
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Touch Screen 112

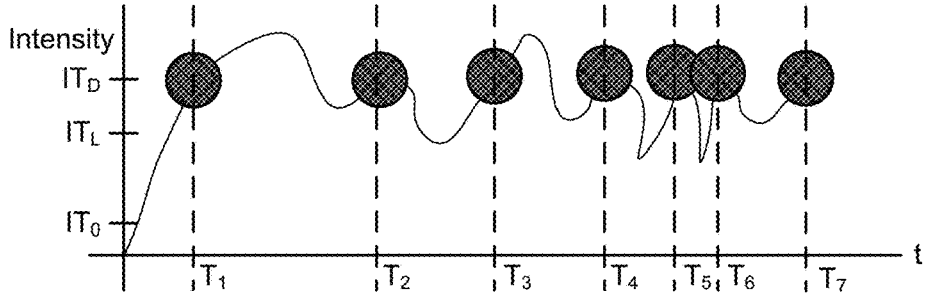
Intensity
IT_D
IT_L
IT_0
T_1
T_2
T_3
T_4
T_5
T_6
T_7
t

Figure 13Q

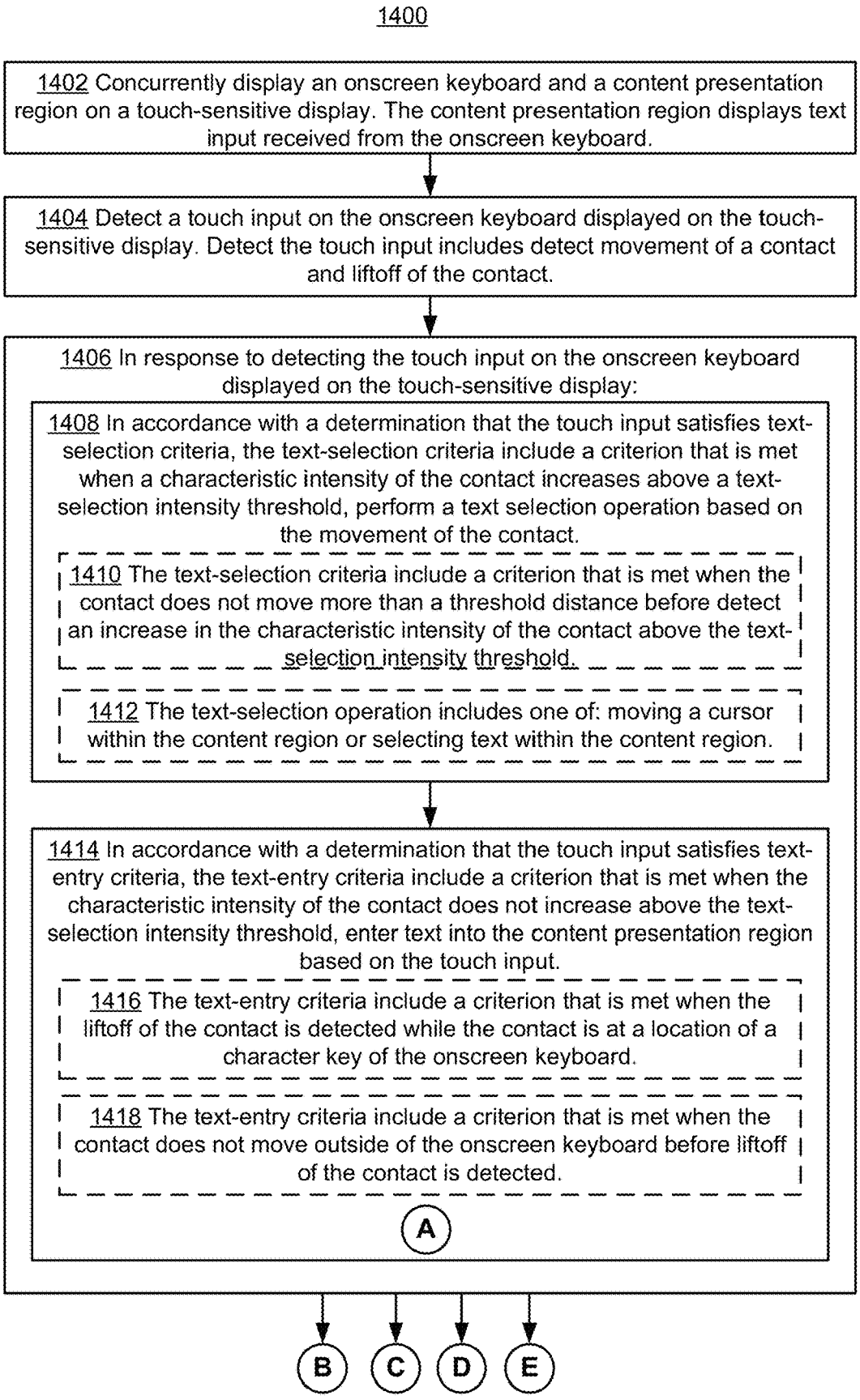
1400
1402 Concurrently display an onscreen keyboard and a content presentation region on a touch-sensitive display. The content presentation region displays text input received from the onscreen keyboard.
1404 Detect a touch input on the onscreen keyboard displayed on the touch-sensitive display. Detect the touch input includes detect movement of a contact and liftoff of the contact.
1406 In response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display:
1408 In accordance with a determination that the touch input satisfies text-selection criteria, the text-selection criteria include a criterion that is met when a characteristic intensity of the contact increases above a text-selection intensity threshold, perform a text selection operation based on the movement of the contact.
1410 The text-selection criteria include a criterion that is met when the contact does not move more than a threshold distance before detect an increase in the characteristic intensity of the contact above the text-selection intensity threshold.
1412 The text-selection operation includes one of: moving a cursor within the content region or selecting text within the content region.
1414 In accordance with a determination that the touch input satisfies text-entry criteria, the text-entry criteria include a criterion that is met when the characteristic intensity of the contact does not increase above the text-selection intensity threshold, enter text into the content presentation region based on the touch input.
1416 The text-entry criteria include a criterion that is met when the liftoff of the contact is detected while the contact is at a location of a character key of the onscreen keyboard.
1418 The text-entry criteria include a criterion that is met when the contact does not move outside of the onscreen keyboard before liftoff of the contact is detected.
A
B
C
D
E

Figure 14A

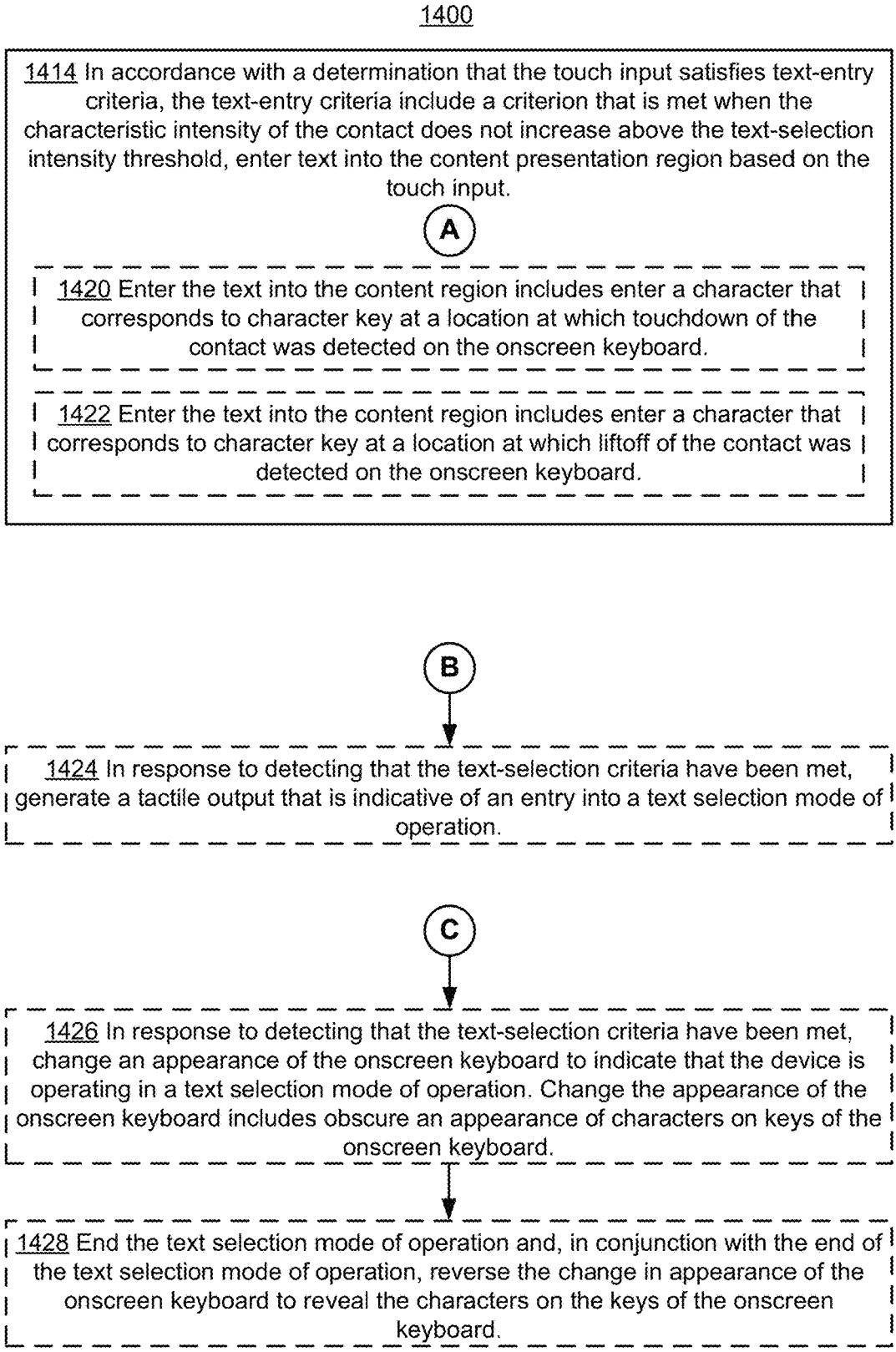
1400
1414 In accordance with a determination that the touch input satisfies text-entry criteria, the text-entry criteria include a criterion that is met when the characteristic intensity of the contact does not increase above the text-selection intensity threshold, enter text into the content presentation region based on the touch input.
A
1420 Enter the text into the content region includes enter a character that corresponds to character key at a location at which touchdown of the contact was detected on the onscreen keyboard.
1422 Enter the text into the content region includes enter a character that corresponds to character key at a location at which liftoff of the contact was detected on the onscreen keyboard.
B
1424 In response to detecting that the text-selection criteria have been met, generate a tactile output that is indicative of an entry into a text selection mode of operation.
C
1426 In response to detecting that the text-selection criteria have been met, change an appearance of the onscreen keyboard to indicate that the device is operating in a text selection mode of operation. Change the appearance of the onscreen keyboard includes obscure an appearance of characters on keys of the onscreen keyboard.
1428 End the text selection mode of operation and, in conjunction with the end of the text selection mode of operation, reverse the change in appearance of the onscreen keyboard to reveal the characters on the keys of the onscreen keyboard.

Figure 14B

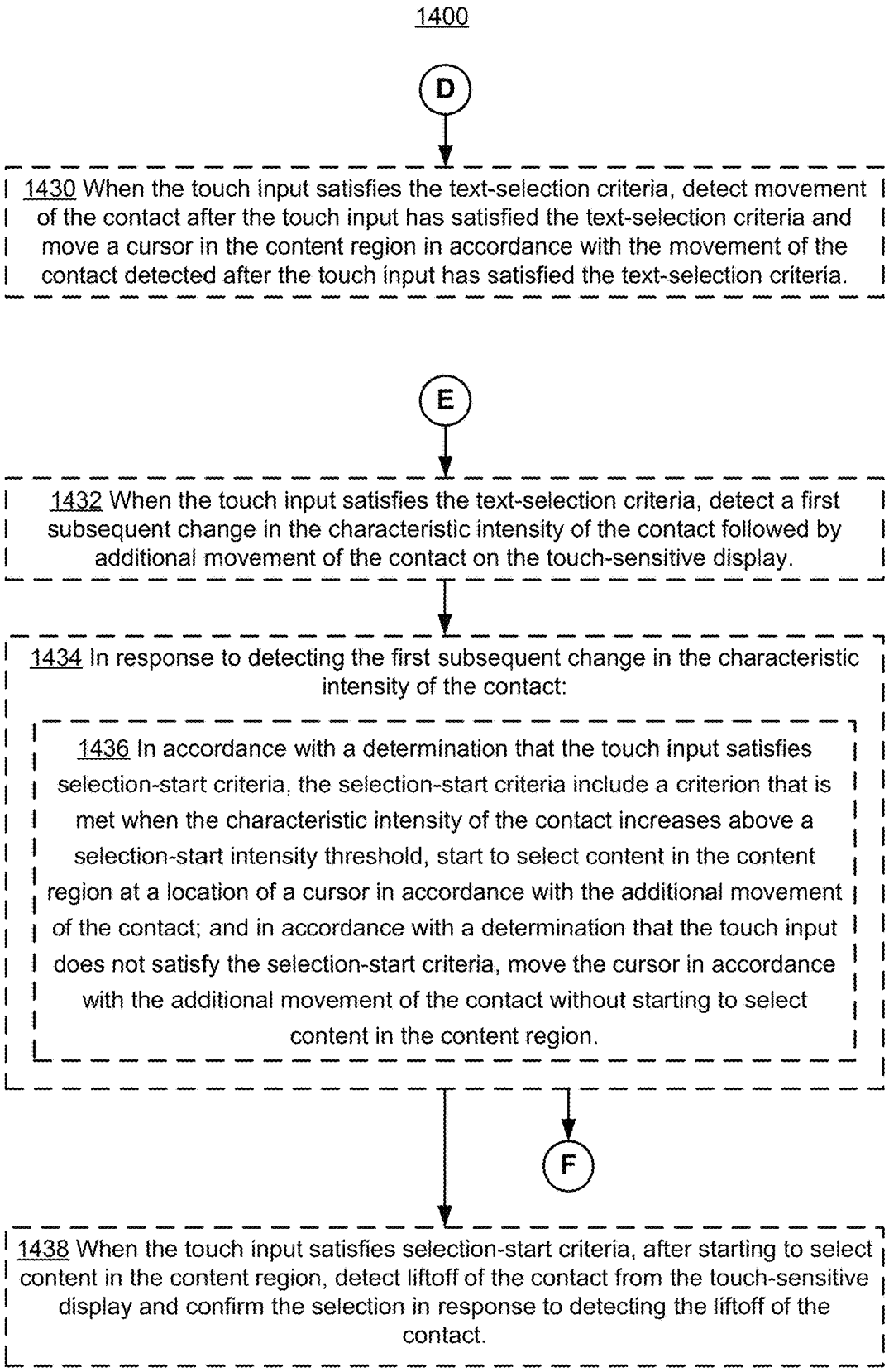
1400
D
1430 When the touch input satisfies the text-selection criteria, detect movement of the contact after the touch input has satisfied the text-selection criteria and move a cursor in the content region in accordance with the movement of the contact detected after the touch input has satisfied the text-selection criteria.
E
1432 When the touch input satisfies the text-selection criteria, detect a first subsequent change in the characteristic intensity of the contact followed by additional movement of the contact on the touch-sensitive display.
1434 In response to detecting the first subsequent change in the characteristic intensity of the contact:
1436 In accordance with a determination that the touch input satisfies selection-start criteria, the selection-start criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-start intensity threshold, start to select content in the content region at a location of a cursor in accordance with the additional movement of the contact; and in accordance with a determination that the touch input does not satisfy the selection-start criteria, move the cursor in accordance with the additional movement of the contact without starting to select content in the content region.
F
1438 When the touch input satisfies selection-start criteria, after starting to select content in the content region, detect liftoff of the contact from the touch-sensitive display and confirm the selection in response to detecting the liftoff of the contact.

Figure 14C

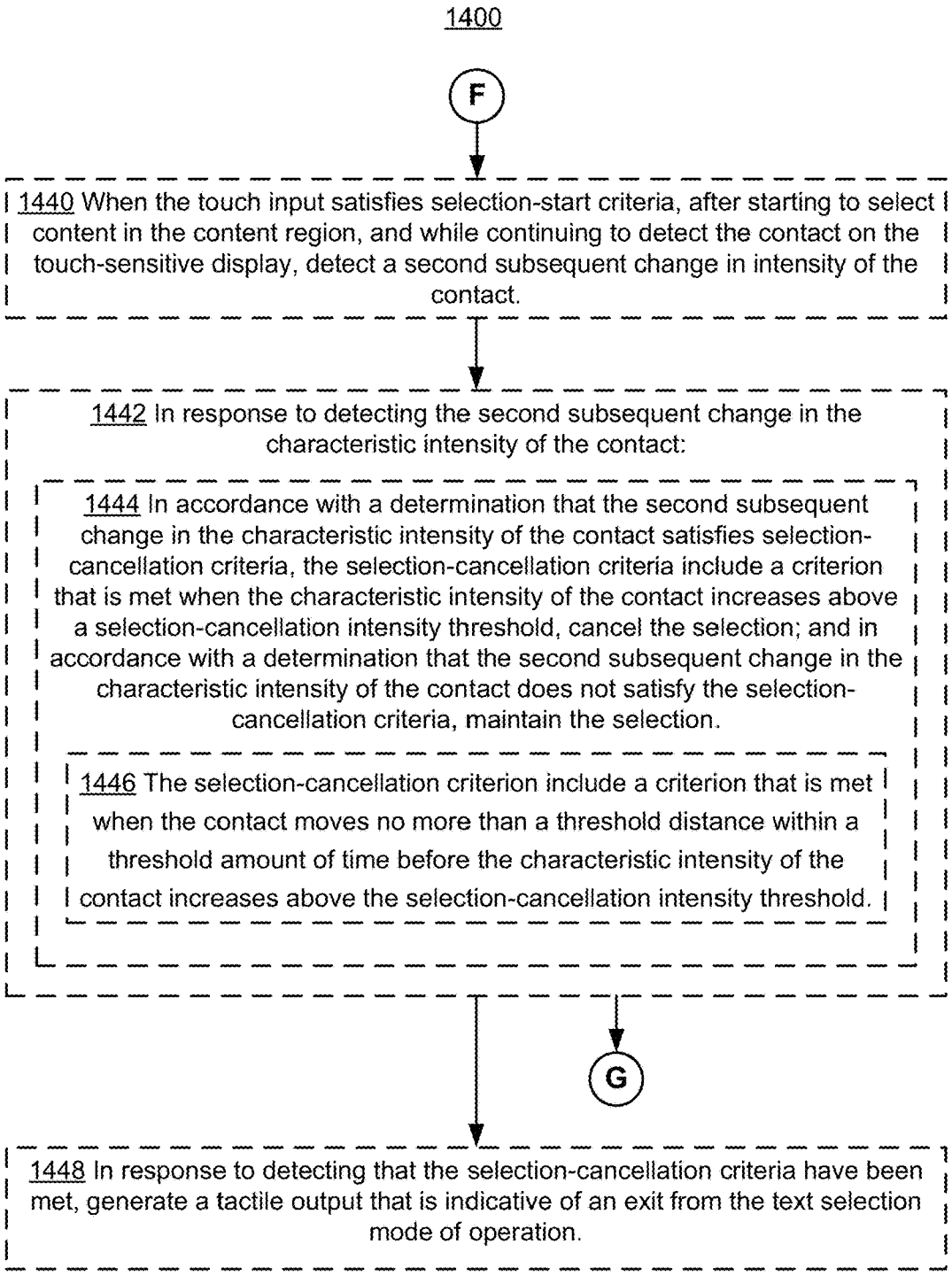
1400
F
1440 When the touch input satisfies selection-start criteria, after starting to select content in the content region, and while continuing to detect the contact on the touch-sensitive display, detect a second subsequent change in intensity of the contact.
1442 In response to detecting the second subsequent change in the characteristic intensity of the contact:
1444 In accordance with a determination that the second subsequent change in the characteristic intensity of the contact satisfies selection-cancellation criteria, the selection-cancellation criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-cancellation intensity threshold, cancel the selection; and in accordance with a determination that the second subsequent change in the characteristic intensity of the contact does not satisfy the selection-cancellation criteria, maintain the selection.
1446 The selection-cancellation criterion include a criterion that is met when the contact moves no more than a threshold distance within a threshold amount of time before the characteristic intensity of the contact increases above the selection-cancellation intensity threshold.
G
1448 In response to detecting that the selection-cancellation criteria have been met, generate a tactile output that is indicative of an exit from the text selection mode of operation.

Figure 14D

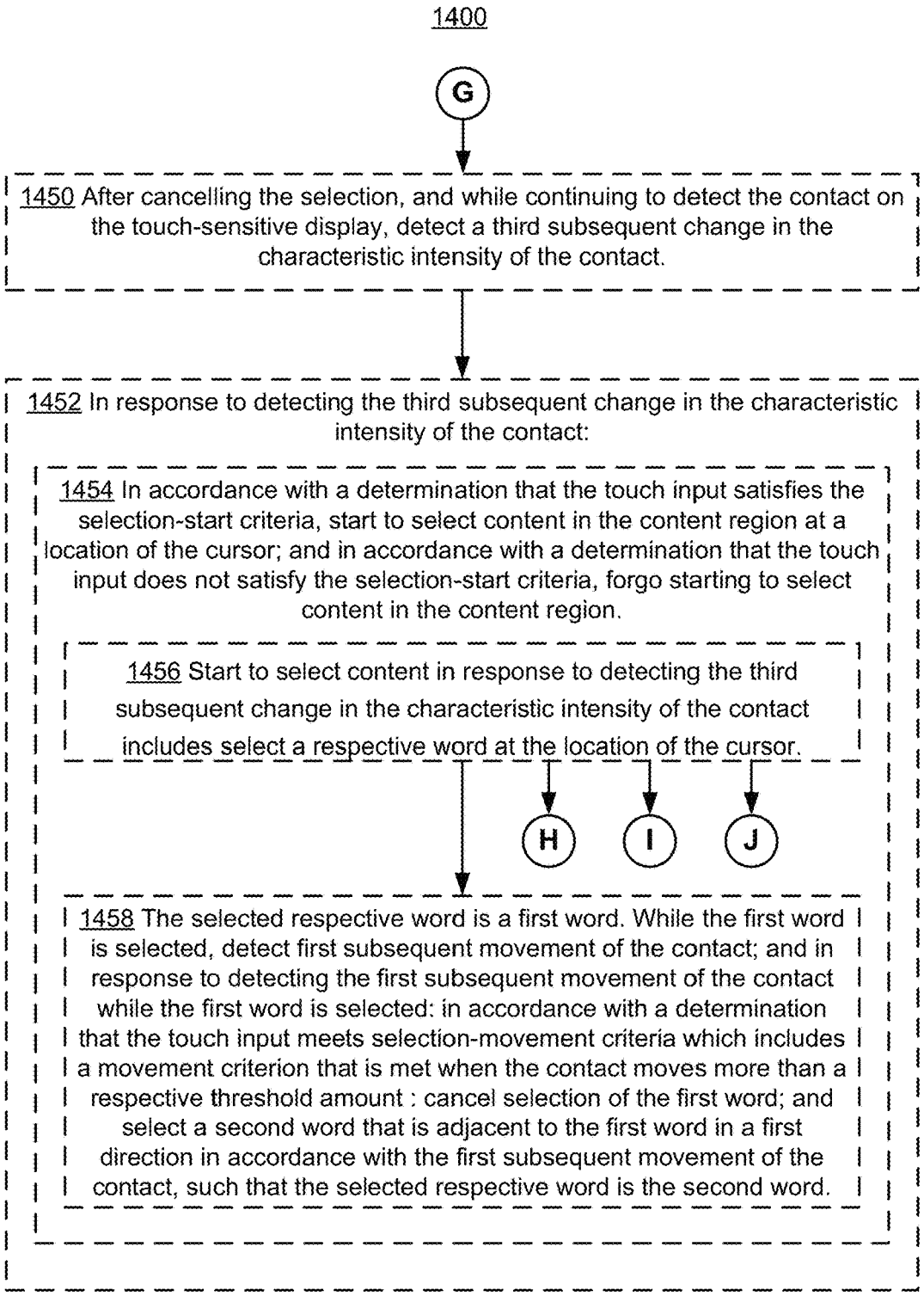
1400
G
1450 After cancelling the selection, and while continuing to detect the contact on the touch-sensitive display, detect a third subsequent change in the characteristic intensity of the contact.
1452 In response to detecting the third subsequent change in the characteristic intensity of the contact:
1454 In accordance with a determination that the touch input satisfies the selection-start criteria, start to select content in the content region at a location of the cursor; and in accordance with a determination that the touch input does not satisfy the selection-start criteria, forgo starting to select content in the content region.
1456 Start to select content in response to detecting the third subsequent change in the characteristic intensity of the contact includes select a respective word at the location of the cursor.
H
I
J
1458 The selected respective word is a first word. While the first word is selected, detect first subsequent movement of the contact; and in response to detecting the first subsequent movement of the contact while the first word is selected: in accordance with a determination that the touch input meets selection-movement criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount : cancel selection of the first word; and select a second word that is adjacent to the first word in a first direction in accordance with the first subsequent movement of the contact, such that the selected respective word is the second word.

Figure 14E

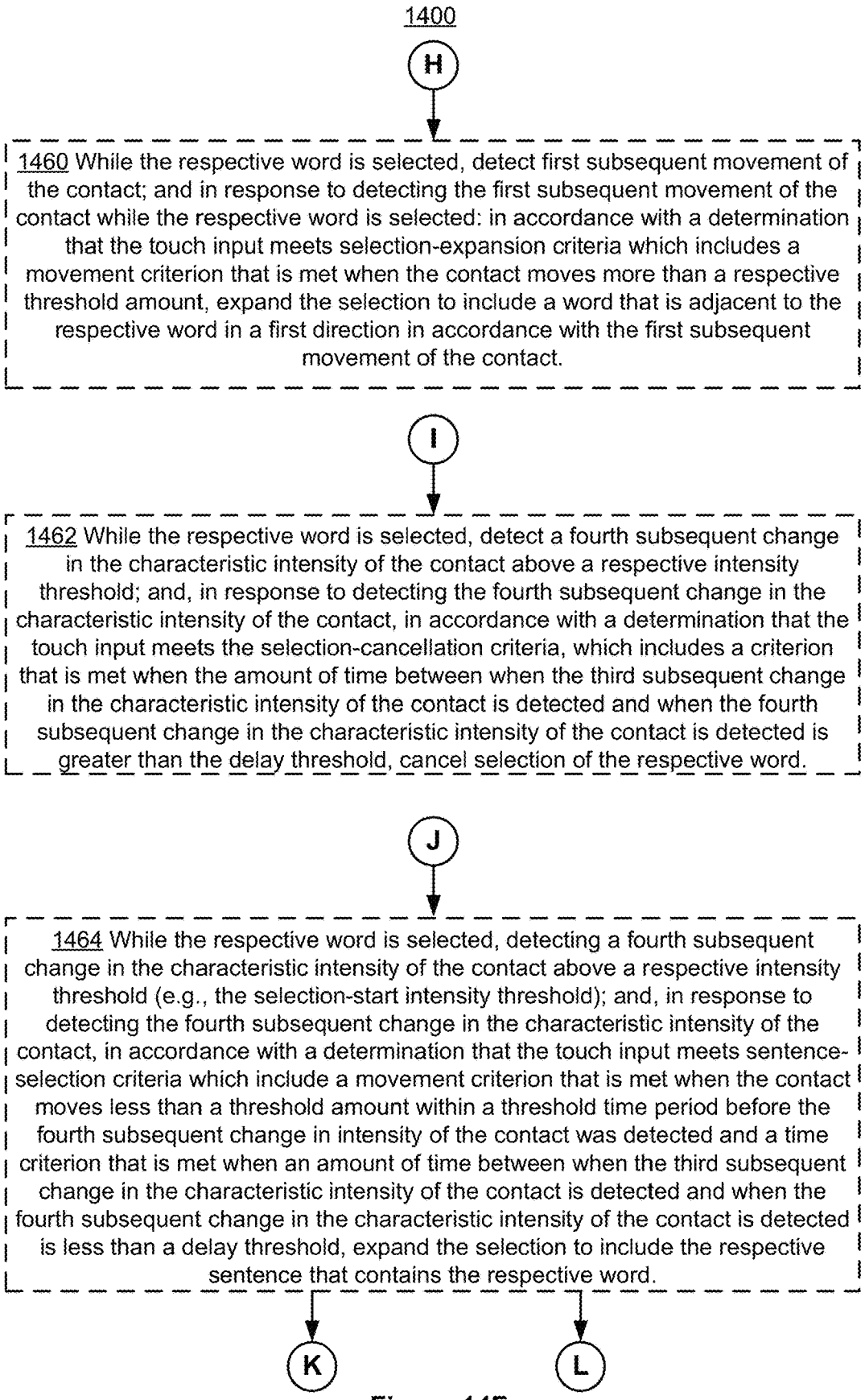
1400
H
1460 While the respective word is selected, detect first subsequent movement of the contact; and in response to detecting the first subsequent movement of the contact while the respective word is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, expand the selection to include a word that is adjacent to the respective word in a first direction in accordance with the first subsequent movement of the contact.
I
1462 While the respective word is selected, detect a fourth subsequent change in the characteristic intensity of the contact above a respective intensity threshold; and, in response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, cancel selection of the respective word.
J
1464 While the respective word is selected, detecting a fourth subsequent change in the characteristic intensity of the contact above a respective intensity threshold (e.g., the selection-start intensity threshold); and, in response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets sentence-selection criteria which include a movement criterion that is met when the contact moves less than a threshold amount within a threshold time period before the fourth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is less than a delay threshold, expand the selection to include the respective sentence that contains the respective word.
K
L

Figure 14F

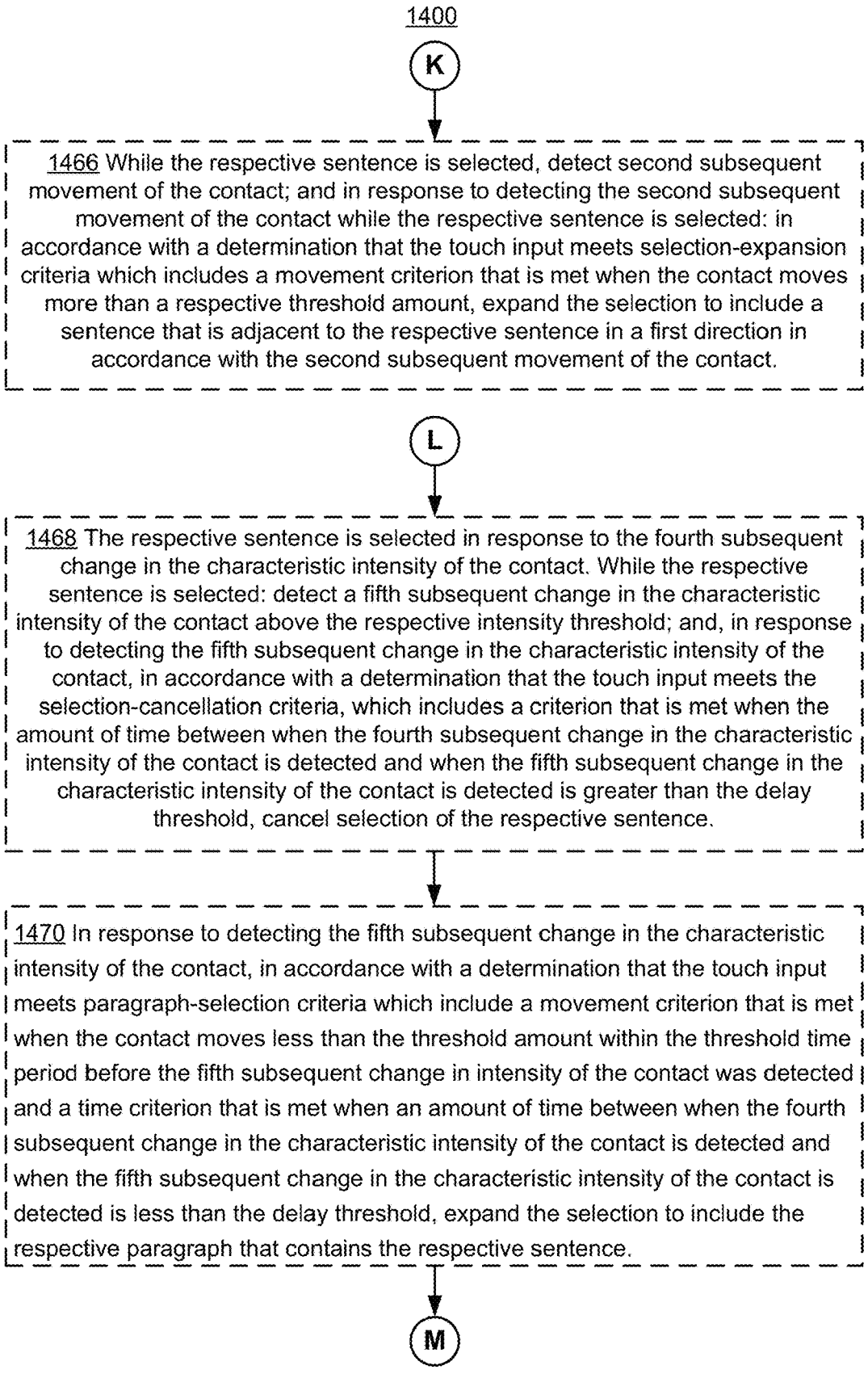
1400
K
1466 While the respective sentence is selected, detect second subsequent movement of the contact; and in response to detecting the second subsequent movement of the contact while the respective sentence is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, expand the selection to include a sentence that is adjacent to the respective sentence in a first direction in accordance with the second subsequent movement of the contact.
L
1468 The respective sentence is selected in response to the fourth subsequent change in the characteristic intensity of the contact. While the respective sentence is selected: detect a fifth subsequent change in the characteristic intensity of the contact above the respective intensity threshold; and, in response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, cancel selection of the respective sentence.
1470 In response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets paragraph-selection criteria which include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period before the fifth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, expand the selection to include the respective paragraph that contains the respective sentence.
M

Figure 14G

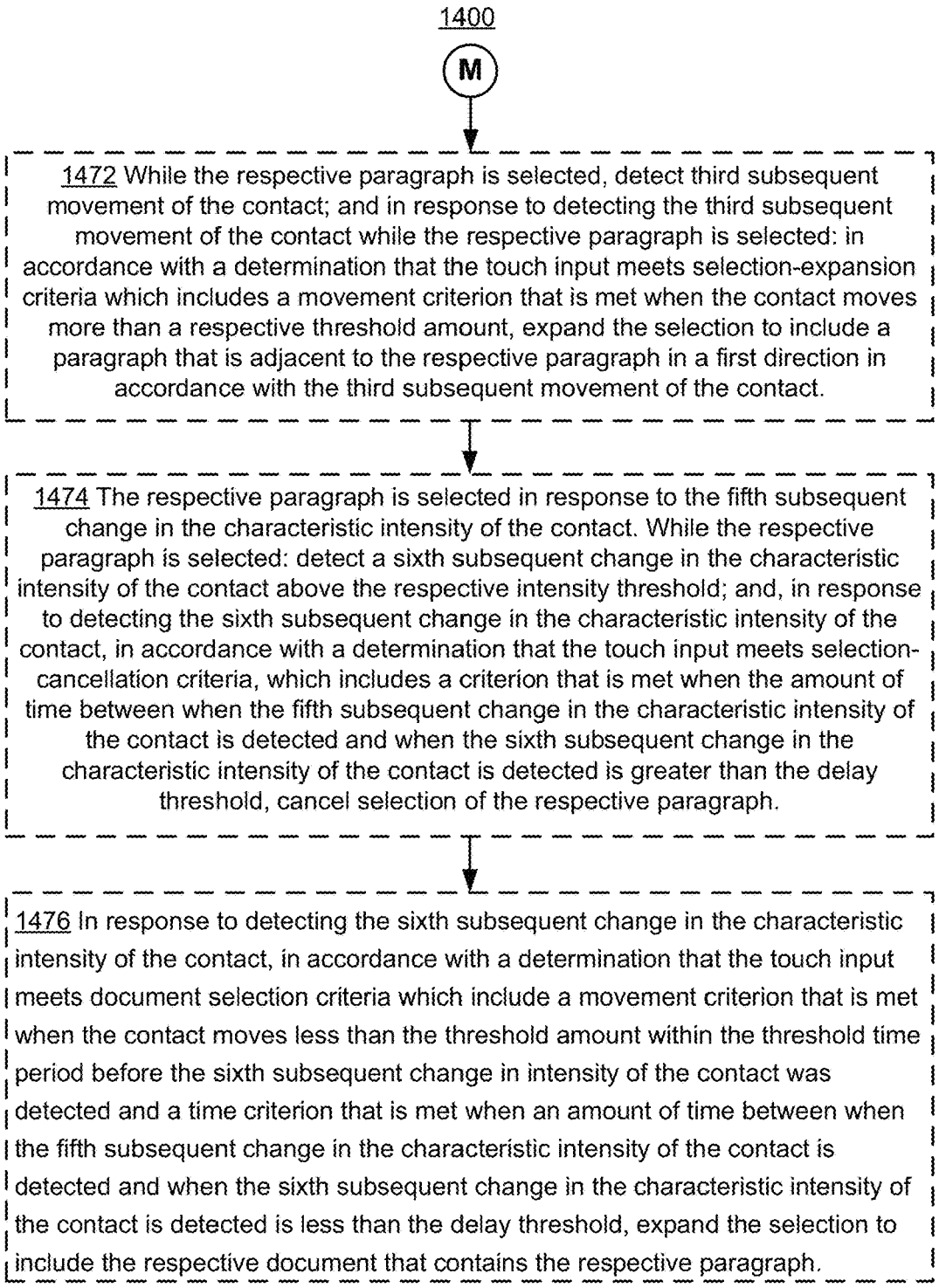
1400
M
1472 While the respective paragraph is selected, detect third subsequent movement of the contact; and in response to detecting the third subsequent movement of the contact while the respective paragraph is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, expand the selection to include a paragraph that is adjacent to the respective paragraph in a first direction in accordance with the third subsequent movement of the contact.
1474 The respective paragraph is selected in response to the fifth subsequent change in the characteristic intensity of the contact. While the respective paragraph is selected: detect a sixth subsequent change in the characteristic intensity of the contact above the respective intensity threshold; and, in response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, cancel selection of the respective paragraph.
1476 In response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets document selection criteria which include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period before the sixth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, expand the selection to include the respective document that contains the respective paragraph.

Figure 14H

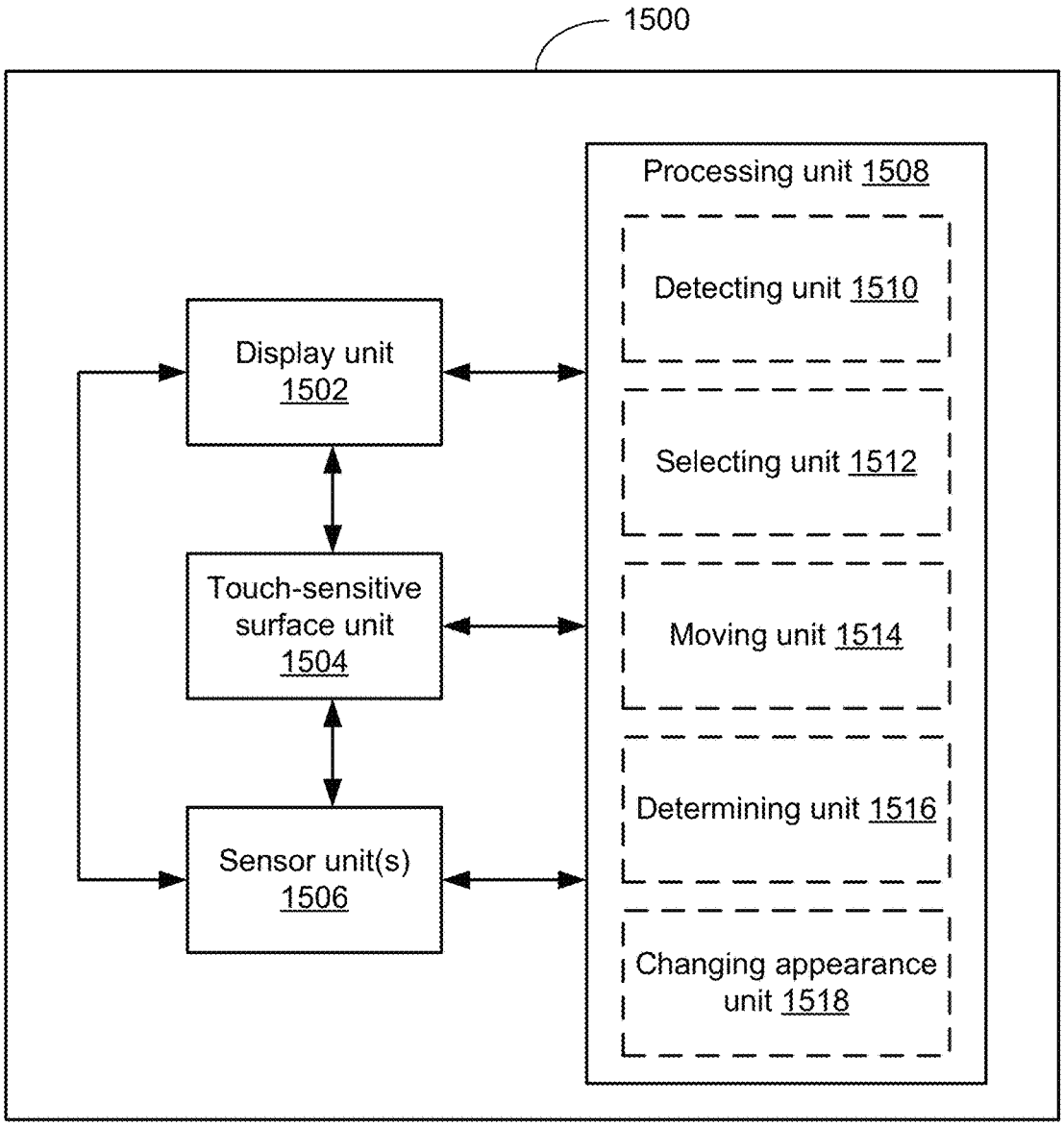
1500
Processing unit 1508
Detecting unit 1510
Selecting unit 1512
Moving unit 1514
Determining unit 1516
Changing appearance unit 1518
Display unit 1502
Touch-sensitive surface unit 1504
Sensor unit(s) 1506

Figure 15

TOUCH INPUT CURSOR MANIPULATION

RELATED APPLICATIONS

This application is a continuation of U.S. application Ser. No. 16/258,394, filed Jan. 25, 2019, which is a continuation of U.S. application Ser. No. 15/499,693, filed Apr. 27, 2017, now U.S. Pat. No. 10,222,980, which is a continuation of U.S. patent application Ser. No. 14/866,361, filed Sep. 25, 2015, now U.S. Pat. No. 9,639,184, which is a continuation of U.S. patent application Ser. No. 14/864,737, filed Sep. 24, 2015, now U.S. Pat. No. 9,785,305, which claims priority to U.S. Provisional Patent Application Ser. No. 62/215,720, filed Sep. 8, 2015, U.S. Provisional Patent Application Ser. No. 62/213,593, filed Sep. 2, 2015, U.S. Provisional Patent Application Ser. No. 62/172,162, filed Jun. 7, 2015, and U.S. Provisional Patent Application Ser. No. 62/135,619, filed Mar. 19, 2015. All of these applications are incorporated by reference herein in their entireties.

TECHNICAL FIELD

This disclosure relates generally to electronic devices with touch-sensitive surfaces, and in particular to cursor manipulation and content selection in an electronic document.

BACKGROUND

The use of touch-sensitive surfaces as input devices for computers and other electronic computing devices has increased significantly in recent years. Exemplary touch-sensitive surfaces include touch pads and touch screen displays. Such surfaces are widely used to review and edit electronic documents by manipulating a cursor within the electronic document presented on a display. These electronic documents are viewed or edited within applications having viewing and editing capabilities (e.g., drawing applications, presentation applications (e.g., Apple's KEYNOTE, or Microsoft's POWERPOINT), word processing applications (e.g., Apple's PAGES or Microsoft's WORD), website creation applications, spreadsheet applications (e.g., Apple's NUMBERS or Microsoft's EXCEL)).

Conventional cursor manipulation methods that require the use of a mouse, or other peripheral input mechanism, are relatively inefficient as they require the user to move one hand away from the keyboard to the mouse in order to make the selection. Similarly, conventional user interfaces provided on touch screen displays do not provide a simple and intuitive way to manipulate the cursor for content selection and editing. As such, it is desirable to provide a more efficient means for manipulating a cursor displayed in an electronic document presented on a touch screen display.

SUMMARY

Accordingly, there is a need for electronic devices with faster, more efficient methods and interfaces for cursor manipulation and content (e.g., text) selection. Such methods and interfaces optionally complement or replace conventional methods for cursor manipulation and content selection. Such methods and interfaces reduce the number, extent, and/or nature of the inputs from a user and produce a more efficient human-machine interface. For battery-operated devices, a more efficient input mechanism also requires less computing resources, thereby increasing battery life of the device.

In order to manipulate a cursor in a document on a conventional portable multifunction device, users often need to make finger contact with precise locations on a touch sensitive screen at the location of the cursor. This is often difficult and the user cannot see the precise location of the cursor under their finger.

The above deficiencies and other problems associated with user interfaces for electronic devices with touch-sensitive surfaces are addressed by the devices and methods described herein. The methods described herein allow a user manipulate a cursor and perform editing functions, such as text selection and moving a selection, from any part of the touch-sensitive surface. For example, a two-finger touch input can be detected anywhere on the touch screen, including over the keyboard. Users can greatly benefit from this for at least two reasons. First, the multi-finger gesture detection can be distinguished from a single-finger detection (e.g., single-finger taps), so that a single-finger contact or gesture at the keyboard can be reserved for other functions, e.g., text entry. Second, it allows for a more efficient user input because the user does not have to consider where the cursor gestures are being made (e.g., the user need not be concerned about inadvertent key activation) and can instead focus on the movement of the cursor.

In some embodiments, the device is portable (e.g., a notebook computer, tablet computer, or handheld device), while in other embodiments, the device is a desktop computer. The device has a touch-sensitive display (also known as a "touch screen" or "touch screen display"), and in some embodiments it also includes a touchpad.

In some embodiments, the device has a graphical user interface (GUI), one or more processors, memory and one or more modules, programs or sets of instructions stored in the memory for performing multiple functions. In some embodiments, the user interacts with the GUI primarily through touch inputs, including finger contacts and gestures, on the touch-sensitive surface. In some embodiments, the functions optionally include image reviewing, editing, drawing, presenting, word processing, website creation, authoring disks, spreadsheet creation or editing, playing games, using a telephone on the device, video-conferencing, e-mailing, instant messaging, digital photography or videography, web browsing, playing digital music or video, note taking, or the like. Executable instructions for performing these functions are, optionally, included in a non-transitory computer readable storage medium or other computer program product configured for execution by one or more processors.

In accordance with some embodiments, a method of cursor manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document on the display; displaying a cursor within the electronic document; detecting two substantially simultaneous touch inputs anywhere on the touch screen display; and in response to detecting the two substantially simultaneous touch inputs: selecting a portion of the content in the document closest to the cursor; and displaying the portion of the content as selected content.

In accordance with some embodiments, the method of cursor manipulation further includes: while the portion of the content is displayed as selected content, detecting an additional two substantially simultaneous touch inputs anywhere on the touch screen display; in response to detecting the additional two substantially simultaneous touch inputs, selecting a first expanded portion of the content that includes the portion of the content; and displaying the first expanded portion as selected content.

In accordance with some embodiments, the method of cursor manipulation further includes: while the first expanded portion of the content is displayed as selected content, detecting an additional two substantially simultaneous touch inputs on the touch screen display; in response to detecting the additional two substantially simultaneous touch inputs, selecting a second expanded portion of the content that includes the expanded portion of the content; and displaying the second expanded portion as selected content.

In accordance with some embodiments, the method of cursor manipulation further includes: while the second expanded portion of the content is displayed as selected content, detecting an additional two substantially simultaneous touch inputs on the touch screen display; in response to detecting the additional two substantially simultaneous touch inputs, selecting a third expanded portion of the content that includes the first expanded portion of the content; and displaying the third expanded portion as selected content.

In accordance with some embodiments, the content includes text and the portion of the content is a word located closest to the cursor in the text, the expanded portion is a sentence, the first expanded portion is a paragraph, and the second expanded cursor is a page.

In accordance with some embodiments, the content includes text and the portion of the content is a word located closest to the cursor.

In accordance with some embodiments, the method of cursor manipulation further includes: detecting lift-off of the two substantially simultaneous touch inputs from the touch screen display, followed by an additional two substantially simultaneous touch inputs anywhere on the touch screen display; detecting a continuous touch gesture from locations of the additional two substantially simultaneous touch inputs on the touch screen display to additional locations on the touch screen display; and in response to detecting the continuous touch gesture, expanding the selected content to include additional content beyond the portion in a direction of toward the additional locations.

In accordance with some embodiments, the method of cursor manipulation further includes: detecting a first touch input on the touch screen display at a first location within the expanded selected content; detecting, substantially simultaneous with the detection of the first touch input, a second touch input at a second location within the expanded selected content; and in response to detecting the first and second touch inputs, expanding the display of the selected content based on the selected content.

In accordance with some embodiments, the method further includes: upon determining that the two substantially simultaneous touch inputs remain in contact with the touch screen display, detecting a continuous touch gesture at least partially across the touch screen display from locations of the two substantially simultaneous touch inputs; in response to the gesture, expanding the selection of the content beyond the portion of the content in a direction of the gesture.

In accordance with some embodiments, the cursor is an insertion point.

In accordance with some embodiments, the method of cursor manipulation further includes: detecting an additional two substantially simultaneous touch inputs on the touch screen display at respective first and second locations within boundaries of the selected content; upon determining that the two substantially simultaneous touch inputs remain in contact with the touch screen display, detecting a continuous touch gesture across the touch screen display; in response to detecting a lift off of the continuous touch gesture, moving the selected content to a different location.

In accordance with some embodiments, the method of cursor manipulation further includes: prior to moving the selected content to the second location, displaying a ghost cursor offset from the selected content, wherein the ghost selection moves with the continuous touch gesture, wherein the different location is the location of the ghost cursor at the time of the lift off.

In accordance with some embodiments, a method of cursor manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document on the touch screen display; displaying a cursor at a current location within the content on the touch screen display; detecting two substantially simultaneous touch inputs at a first region on the touch screen display; upon determining that the two substantially simultaneous touch inputs remain in contact with the touch screen display, detecting a continuous touch gesture from a location of the two substantially simultaneous touch inputs across the touch screen display from the first region to a second region; and in response to detecting the continuous touch gesture: moving the cursor from the current location to a new location in a direction of the continuous touch gesture.

In accordance with some embodiments, a distance between the first region and the second region is substantially the same as a distance between the current location and the new location.

In accordance with some embodiments, the method further includes: while moving the cursor, displaying a ghost cursor offset from the cursor; and upon detecting a termination of the continuous touch gesture, placing the cursor at the location of the ghost cursor and ceasing the display of the ghost cursor.

In accordance with some embodiments, displaying the cursor at a current location includes displaying a selection of a portion of the content at the current location, moving the cursor from the current location to a new location in a direction of the continuous touch gesture includes: dismissing the selection and moving the cursor from the current location to the new location.

In accordance with some embodiments, a method of cursor manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying text on the display; displaying a cursor at a line within the text; detecting a two-finger swipe gesture on the touch screen display in a direction at least partially parallel to the line and towards an edge of the touch screen display; and in response to detecting the two-finger swipe gesture moving the cursor to a distal point of the text. For example, an end or beginning of a line or a top or bottom of a page or document.

In accordance with some embodiments, the detecting requires that the two-finger swipe gesture be performed at a speed higher than a predetermined speed.

In accordance with some embodiments, the distal point of the text is at a location in the direction of the gesture. For example, an end or beginning of a line or a top or bottom of a page or document.

In accordance with some embodiments, moving the cursor to the distal point of the text includes moving the cursor to a beginning or an end of the line of the text or a beginning or an end of the text (e.g., the top or bottom of a document or page) in accordance with the direction of the two-finger swipe.

In accordance with some embodiments, a method of cursor manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document on the display; displaying a cursor within the electronic document; detecting a touch input on the touch screen display, wherein the touch input is located on a word within the content; and in response to detecting the touch input: selecting the word; and displaying a command display area adjacent to the selected word, wherein the second command display area includes an icon for cutting the selected word, an icon for copying the selected word, and an icon for pasting a previously selected content.

In accordance with some embodiments, a method of selection manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document on the display; displaying a selection of the content within the electronic document; detecting a single touch input on the touch screen display at a location over the selection; in response to detecting the single touch input at the location, displaying a set of options related to the selection; determining if the single touch input remains at the location for a predetermined amount of time followed by a continuous touch gesture away from the location on the touch screen display; and in response to detecting the single touch input remaining at the location for the predetermined amount of time followed by the continuous touch gesture away from the location, moving the selection to a different location in a direction of the continuous touch gesture.

In accordance with some embodiments, a method of selection manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document on the display; displaying a selection of the content within the electronic document; detecting three substantially simultaneous touch inputs at locations anywhere on the touch screen display; determining if the three substantially simultaneous touch inputs is followed by three continuous touch gestures away from the locations on the touch screen display; and in response to detecting the three continuous touch gestures, moving the selection to a different location in a direction of the continuous touch gestures.

In accordance with some embodiments, a method of cursor manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document on the touch screen display, the content includes at least one line of text comprising at least two words; detecting a touch input on the content; and in response to detecting the touch input: determining a distance of the touch input to a closest space between the two words within the electronic document; and in accordance with a determination that the distance is greater than a predetermined threshold distance, selecting a word within the electronic document closest to the touch input and displaying an indication of the selection.

In accordance with some embodiments, the method further places a cursor in the closest space after a preceding word when the distance is less than the predetermined threshold distance.

In accordance with some embodiments, the predetermined threshold distance is calculated based on the percentage of the size of the word closest to the touch input.

In accordance with some embodiments, the method further includes: while displaying the selection, detecting an additional touch input on the touch screen display at a location within the selection; and in response to detecting the additional touch input, dismissing the selection and placing a cursor adjacent to a word within the electronic document based on the location of the additional touch input relative to the closest space to this word.

In accordance with some embodiments, the method further includes: while displaying the selection, detecting an additional touch input on the touch screen display at a location within the selection; detecting, without breaking contact with the touch screen display following the additional touch input, a continuous touch gesture from a first location of the additional touch input on the touch screen display to a second location on the touch screen display; and in response to detecting the continuous touch gesture, expanding the selection to include additional content beyond the word in a direction towards the second location.

In accordance with some embodiments, the method further includes: detecting a double-tap touch input; in response to detecting the double-tap touch input, selecting a word closest to the double-tap touch input; and displaying an indication of the selection.

In accordance with some embodiments, the method further includes: detecting a double-tap touch input at a space between two words within the electronic document; in response to detecting the double-tap touch input, selecting the word closest to the double-tap touch input that follows the space; and displaying an indication of the selection.

In accordance with some embodiments, the method further includes: detecting a triple-tap touch input; in response to detecting the triple-tap touch input, selecting a sentence closest to the triple-tap touch input; and displaying an indication of the selection of the sentence.

In accordance with some embodiments, the method further includes: detecting a quadruple-tap touch input; in response to detecting the quadruple-tap touch input, selecting a paragraph closest to the quadruple-tap touch input; and displaying an indication of the selection of the paragraph.

In accordance with some embodiments, the method further includes: detecting a quintuple-tap touch input; in response to detecting the quintuple-tap touch input, selecting the content; and displaying an indication of the selection of the content.

In accordance with some embodiments, selecting the word within the electronic document closest to the touch input is performed when the distance is equal to the predetermined threshold distance.

In accordance with some embodiments, placing the cursor in the closest space after the preceding word is performed when the distance is equal to the predetermined threshold distance.

In accordance with some embodiments, a method of keyboard display is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document on the touch screen display; displaying a soft keyboard on the touch screen display; detecting two substantially simultaneous touch inputs on the soft keyboard; and in response to detecting the two substantially simultaneous touch inputs on the soft keyboard, displaying a blurred soft keyboard.

In accordance with some embodiments, the method further includes: detecting, without breaking contact with the touch screen display following the two substantially simultaneous touch inputs, movements of the two substantially

touch inputs from the soft keyboard to the content; and in response to detecting the continuous finger contact to the content, replacing display of the blurred soft keyboard with display of the soft keyboard.

In accordance with some embodiments, displaying the blurred soft keyboard includes changing one or more of: color, hue, saturation, brightness, and contrast of the soft keyboard based on the content of the electronic document.

In accordance with some embodiments, a method of content selection is performed at a portable multifunction device including one or more processors, memory, and a touch-sensitive display. The method includes: concurrently displaying an onscreen keyboard and a content presentation region on the touch-sensitive display, wherein the content presentation region displays text input received from the onscreen keyboard; detecting a touch input on the onscreen keyboard displayed on the touch-sensitive display; in response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display, determining whether the touch input satisfies one or more criteria for entering a text selection mode; and in accordance with a determination that the touch input satisfies the one or more criteria for entering the text selection mode: concurrently displaying, in the content presentation region, a first cursor at a first location and a second cursor at a second location that is different from the first location.

In accordance with some embodiments, the one or more criteria for entering the text selection mode include the touch input including a two-finger drag gesture over the onscreen keyboard.

In accordance with some embodiments, the device has one or more sensors to detect intensity of contacts with the touch-sensitive display, the touch input on the touch-sensitive display includes an input by a contact on the onscreen keyboard, and the one or more criteria for entering the text selection mode include the contact on the onscreen keyboard having an intensity that exceeds a predetermined deep press intensity threshold.

In accordance with some embodiments, the method further includes: in accordance with the determination that the touch input satisfies the one or more criteria for entering the text selection mode: visually obscuring keys on the onscreen keyboard.

In accordance with some embodiments, visually obscuring the keys on the onscreen keyboard includes applying a blurring effect to the onscreen keyboard.

In accordance with some embodiments, visually obscuring the keys on the onscreen keyboard includes transforming the onscreen keyboard into an onscreen touchpad.

In accordance with some embodiments, visually obscuring the keys on the onscreen keyboard includes making the onscreen keyboard semitransparent to partially reveal content lying underneath the onscreen keyboard.

In accordance with some embodiments, the second location is based on a location of an initial contact in the touch input; and the first location is a permitted insertion position in the content presentation region that is based on the second location.

In accordance with some embodiments, the first location is an insertion position at which the first cursor is located when the touch input is determined to satisfy the one or more criteria for entering the text selection mode; and the second location is displaced from the first location by a predetermined offset.

In accordance with some embodiments, one of the first and second cursors is already displayed in the content presentation region before both of the first and second cursors are concurrently displayed in the content presentation region.

In accordance with some embodiments, the method further includes: detecting movement of one or more contacts of the touch input; and moving the second cursor within the content presentation region in accordance with the movement of the one or more contacts of the touch input.

In accordance with some embodiments, the method further includes: moving the first cursor based on the movement of the second cursor, wherein movement of the first cursor includes discrete movements between permitted insertion positions in the content presentation region.

In accordance with some embodiments, the method further includes: detecting a lift-off of the touch input after detecting the movement of the one or more contacts of the touch input; and in response to detecting the lift-off of the touch input: ceasing to display the second cursor.

In accordance with some embodiments, the method further includes: in response to detecting the lift-off of the touch input, maintaining display of the first cursor at a respective permitted insertion position reached by the first cursor after the discrete movements of the first cursor.

In accordance with some embodiments, the method further includes: in response to detecting the lift-off of the touch input, ceasing to display the first cursor.

In accordance with some embodiments, the onscreen keyboard is obscured in accordance with the determination that the touch input satisfies the one or more criteria for entering the text selection mode, and the method further includes: in response to detecting the lift-off of the touch input, restoring display of the onscreen keyboard.

In accordance with some embodiments, the device has one or more sensors to detect intensity of contacts with the touch-sensitive display, and the method further includes: in the text selection mode, detecting that an intensity of a contact in the touch input exceeds a predetermined intensity threshold; after detecting that the intensity of the contact in the touch input exceeds the predetermined intensity threshold, detecting movement of the contact in the touch input; in response to detecting the movement of the contact in the touch input, after detecting that the intensity of the contact in the touch input exceeds the predetermined intensity threshold: selecting a portion of the text input in accordance with the movement of the contact in the touch input.

In accordance with some embodiments, the selected portion of the text input begins at a position of the first cursor when the detected intensity of the contact in the touch input exceeded the predetermined intensity threshold.

In accordance with some embodiments, the method further includes: detecting lift-off of the contact in the touch input after selecting the portion of the text input in accordance with the movement of the contact in the touch input; and, in response to detecting the lift-off of the contact in the touch input, confirming selection of the portion of the text input.

In accordance with some embodiments, the method further includes: after selecting the portion of the text input, while the portion of the text input is selected, detecting an intensity of the contact in the touch input that exceeds the predetermined threshold; and, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold while the portion of the text input is selected, clearing selection of the portion of the text input.

In accordance with some embodiments, the method further includes: after selecting the portion of the text input, while the portion of the text input is selected, detecting an

intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact; and, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact, confirming selection of the portion of the text input.

In accordance with some embodiments, the method further includes: after selecting the portion of the text input, while the portion of the text input is selected, detecting an intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by further movement of the contact; and, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: clearing selection of the portion of the text input.

In accordance with some embodiments, the method further includes: in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: starting selection of a new portion of the text input in accordance with the further movement of the contact.

In accordance with some embodiments, the method further includes: in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: further moving the second cursor and the first cursor within the content presentation region in accordance with the further movement of the contact.

In accordance with some embodiments, the device has one or more sensors to detect intensity of contacts with the touch-sensitive display, and the method further includes: in the text selection mode, detecting a first local intensity peak in the touch input followed by a second local intensity peak in the touch input that both exceed a predetermined intensity threshold; and, in response to detecting the first local intensity peak followed by the second local intensity peak that both exceed the predetermined intensity threshold, selecting a first predetermined unit of the text input according to a current location of the first cursor.

In accordance with some embodiments, the method further includes: after detecting the first local intensity peak followed by the second local intensity peak, detecting a third consecutive local intensity peak in the touch input that exceeds the predetermined intensity threshold; and in response to detecting the three consecutive local intensity peaks in the touch input that all exceed the predetermined deep press intensity threshold, selecting a second predetermined unit of the text input that is larger than and includes the first predetermined unit of the text input.

In accordance with some embodiments, a method of content selection is performed at a portable multifunction device including one or more processors, memory, a touch screen display, and one or more sensors to detect intensity of contacts with the touch-sensitive surface. The method includes: while a contact is detected on the touch-sensitive surface, concurrently displaying on the display content and a text selection indicator at a first location within the content; detecting a first press input by the contact followed by movement of the contact across the touch-sensitive surface that corresponds to movement of at least a portion of the text selection indicator from the first location to a second location on the display; in response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface, selecting content between the first location and the second location; while the content between the first location and the second location is selected, detecting a second press input by the contact on the touch-sensitive surface; in response to detecting the second press input by the contact on the touch-sensitive surface, performing a text selection operation, associated with the content between the first location and the second location, in accordance with the second press input, wherein the contact in the first press input, the movement across the touch-sensitive surface, and the second press input is a single continuous contact with the touch-sensitive surface.

In accordance with some embodiments, detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface includes: detecting an increase in intensity of the contact above a predetermined intensity threshold followed by detecting a decrease in intensity of the contact to an intensity that remains above a predetermined minimum intensity value.

In accordance with some embodiments, the method further includes: in response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface: displaying at least the portion of the text selection indicator at the second location within the content.

In accordance with some embodiments, the text selection operation includes stopping selection of content at the second location and maintaining selection of the content between the first location and the second location.

In accordance with some embodiments, the method further includes: after detecting the second press input and while the content between the first location and the second location remains selected, detecting lift-off of the contact; and in response to detecting the lift-off of the contact, displaying an action menu for the selected content between the first location and the second location.

In accordance with some embodiments, the method further includes: after detecting the second press input by the contact on the touch-sensitive surface and stopping the selection of the content at the second location, detecting further movement of the contact; and in response to detecting the further movement of the contact, displaying at least a portion of the text selection indicator at a third location within the content.

In accordance with some embodiments, the method further includes: in response to detecting the further movement of the contact, canceling selection of content between the first location and the second location without selecting content between the second location and the third location.

In accordance with some embodiments, the text selection operation includes cancelling selection of content between the first location and the second location.

In accordance with some embodiments, the method further includes: after detecting the second press input by the contact on the touch-sensitive surface and canceling the selection of content between the first location and the second location, detecting further movement of the contact; and, in response to detecting the further movement of the contact, selecting content between the second location and a third location.

In accordance with some embodiments, the method further includes: while the content between the second location and the third location is selected, detecting lift-off of the contact; and, in response to detecting the lift-off of the contact while the content between the second location and the third location is selected, stopping selection of the

content at the third location and maintaining selection of the content between the second location and the third location.

In accordance with some embodiments, the method further includes: before displaying the text selection indicator at the first location within the content, detecting an initial press input by the contact on the touch-sensitive surface; and in response to detecting the initial press input, displaying the text selection indicator at an initial location within the content that corresponds to a location of the initial press input on the touch-sensitive surface.

In accordance with some embodiments, the display is a touch-sensitive display that includes the touch-sensitive surface, and the method further includes: concurrently displaying, on the touch-sensitive display, the content and an onscreen keyboard, wherein the initial press input is detected on the onscreen keyboard.

In accordance with some embodiments, the initial press input is detected at a location on the touch-sensitive surface that corresponds to a location of the content on the display.

In accordance with some embodiments, the display is a touch-sensitive display that includes the touch-sensitive surface, and the method further includes: concurrently displaying, on the touch-sensitive display, the content and an onscreen keyboard; before displaying the text selection indicator at the first location within the content, detecting a multi-contact drag input on the onscreen keyboard; and, in response to detecting the multi-contact drag input on the onscreen keyboard, displaying the text selection indicator at an initial location within the content based on a location of the multi-contact drag input on the onscreen keyboard.

In accordance with some embodiments, the content includes editable content and the text selection indicator includes a cursor.

In accordance with some embodiments, the method further includes: displaying a magnifying loupe that displays a magnified version of the cursor and a region surrounding the cursor.

In accordance with some embodiments, selecting the content between the first location and the second location includes: moving the cursor one character space at a time in response to detecting the movement of the contact across the touch-sensitive surface; and selecting one additional character at a time in accordance with the movement of the cursor.

In accordance with some embodiments, the content includes read-only content and the text selection indicator includes a selection area; and displaying the text selection indicator at the first location includes displaying a first word located at the first location within the selection area.

In accordance with some embodiments, the method further includes: displaying a magnifying loupe that displays a magnified version of the selection area and a region surrounding the selection area.

In accordance with some embodiments, selecting the content between the first location and the second location includes: expanding the selection area one word at a time in accordance with the movement of the contact across the touch-sensitive surface; and selecting one additional word at a time in accordance with the expansion of the selection area.

In accordance with some embodiments, the method further includes: foregoing performing the text selection operation, in response to detecting the second press input, in accordance with a determination that the second press input is accompanied by simultaneous movement of the contact across the touch-sensitive surface.

In accordance with some embodiments, when the text is editable text, the text selection indicator is a cursor and selecting content between the first location and the second location includes expanding the selection character-by-character in accordance with movement of the contact on the touch-sensitive surface; and when the text is non-editable text, the text selection indicator is a selection region that initially encompasses a single word and selecting content between the first location and the second location includes expanding the selection word-by-word in accordance with movement of the contact on the touch-sensitive surface.

In accordance with some embodiments, a method of content selection is performed at a portable multifunction device including one or more processors, memory, and a touch-sensitive display. The method includes: concurrently displaying an onscreen keyboard and a content presentation region on the touch-sensitive display, wherein the content presentation region displays text input received from the onscreen keyboard; detecting a touch input on the onscreen keyboard displayed on the touch-sensitive display, wherein detecting the touch input includes detecting movement of a contact and liftoff of the contact; in response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display: in accordance with a determination that the touch input satisfies text-selection criteria, wherein the text-selection criteria include a criterion that is met when a characteristic intensity of the contact increases above a text-selection intensity threshold, performing a text selection operation based on the movement of the contact; and in accordance with a determination that the touch input satisfies text-entry criteria, wherein the text-entry criteria include a criterion that is met when the characteristic intensity of the contact does not increase above the text-selection intensity threshold, entering text into the content presentation region based on the touch input.

In accordance with some embodiments, the text-entry criteria include a criterion that is met when the liftoff of the contact is detected while the contact is at a location of a character key of the onscreen keyboard.

In accordance with some embodiments, the text-entry criteria include a criterion that is met when the contact does not move outside of the onscreen keyboard before liftoff of the contact is detected.

In accordance with some embodiments, entering the text into the content region includes entering a character that corresponds to character key at a location at which touch-down of the contact was detected on the onscreen keyboard.

In accordance with some embodiments, entering the text into the content region includes entering a character that corresponds to character key at a location at which liftoff of the contact was detected on the onscreen keyboard.

In accordance with some embodiments, the text-selection criteria include a criterion that is met when the contact does not move more than a threshold distance before detecting an increase in the characteristic intensity of the contact above the text-selection intensity threshold.

In accordance with some embodiments, the text-selection operation includes one of: moving a cursor within the content region or selecting text within the content region.

In accordance with some embodiments, the method further includes, in response to detecting that the text-selection criteria have been met, generating a tactile output that is indicative of an entry into a text selection mode of operation.

In accordance with some embodiments, the method further includes, in response to detecting that the text-selection criteria have been met, changing an appearance of the onscreen keyboard to indicate that the device is operating in

a text selection mode of operation, wherein changing the appearance of the onscreen keyboard includes obscuring an appearance of characters on keys of the onscreen keyboard.

In accordance with some embodiments, the method further includes, ending the text selection mode of operation and, in conjunction with the end of the text selection mode of operation, reversing the change in appearance of the onscreen keyboard to reveal the characters on the keys of the onscreen keyboard.

In accordance with some embodiments, the method further includes, when the touch input satisfies the text-selection criteria, detecting movement of the contact after the touch input has satisfied the text-selection criteria and moving a cursor in the content region in accordance with the movement of the contact detected after the touch input has satisfied the text-selection criteria.

In accordance with some embodiments, the method further includes, when the touch input satisfies the text-selection criteria, detecting a first subsequent change in the characteristic intensity of the contact followed by additional movement of the contact on the touch-sensitive display; and, in response to detecting the first subsequent change in the characteristic intensity of the contact: in accordance with a determination that the touch input satisfies selection-start criteria, wherein the selection-start criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-start intensity threshold, starting to select content in the content region at a location of a cursor in accordance with the additional movement of the contact; and in accordance with a determination that the touch input does not satisfy the selection-start criteria, moving the cursor in accordance with the additional movement of the contact without starting to select content in the content region.

In accordance with some embodiments, the method further includes, when the touch input satisfies selection-start criteria, after starting to select content in the content region, detecting liftoff of the contact from the touch-sensitive display and confirming the selection in response to detecting the liftoff of the contact.

In accordance with some embodiments, the method further includes, when the touch input satisfies selection-start criteria, after starting to select content in the content region, and while continuing to detect the contact on the touch-sensitive display, detecting a second subsequent change in intensity of the contact; in response to detecting the second subsequent change in the characteristic intensity of the contact: in accordance with a determination that the second subsequent change in the characteristic intensity of the contact satisfies selection-cancellation criteria, wherein the selection-cancellation criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-cancellation intensity threshold cancelling the selection; and in accordance with a determination that the second subsequent change in the characteristic intensity of the contact does not satisfy the selection-cancellation criteria, maintaining the selection.

In accordance with some embodiments, the selection-cancellation criteria include a criterion that is met when the contact moves no more than a threshold distance within a threshold amount of time before the characteristic intensity of the contact increases above the selection-cancellation intensity threshold.

In accordance with some embodiments, the method further includes, in response to detecting that the selection-cancellation criteria have been met, generating a tactile output that is indicative of an exit from the text selection mode of operation.

In accordance with some embodiments, the method further includes, after canceling the selection, and while continuing to detect the contact on the touch-sensitive display, detecting a third subsequent change in the characteristic intensity of the contact; and, in response to detecting the third subsequent change in the characteristic intensity of the contact: in accordance with a determination that the touch input satisfies the selection-start criteria, starting to select content in the content region at a location of the cursor; and in accordance with a determination that the touch input does not satisfy the selection-start criteria, forgoing starting to select content in the content region.

In accordance with some embodiments, starting to select content in response to detecting the third subsequent change in the characteristic intensity of the contact includes selecting a respective word at the location of the cursor.

In accordance with some embodiments, the selected respective word is a first word, and the method further includes, while the first word is selected, detecting first subsequent movement of the contact; and in response to detecting the first subsequent movement of the contact while the first word is selected: in accordance with a determination that the touch input meets selection-movement criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, canceling selection of the first word; and selecting a second word that is adjacent to the first word in a first direction in accordance with the first subsequent movement of the contact, such that the selected respective word is the second word.

In accordance with some embodiments, the method further includes, while the respective word is selected, detecting first subsequent movement of the contact; and in response to detecting the first subsequent movement of the contact while the respective word is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, expanding the selection to include a word that is adjacent to the respective word in a first direction in accordance with the first subsequent movement of the contact.

In accordance with some embodiments, the method further includes, while the respective word is selected, detecting a fourth subsequent change in the characteristic intensity of the contact above a respective intensity threshold; and, in response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, cancelling selection of the respective word.

In accordance with some embodiments, the method further includes, while the respective word is selected, detecting a fourth subsequent change in the characteristic intensity of the contact above a respective intensity threshold; and, in response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets sentence-selection criteria which include a movement criterion that is met when

the contact moves less than a threshold amount within a threshold time period before the fourth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is less than a delay threshold, expanding the selection to include the respective sentence that contains the respective word.

In accordance with some embodiments, the method further includes, while the respective sentence is selected, detecting second subsequent movement of the contact; and in response to detecting the second subsequent movement of the contact while the respective sentence is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, expanding the selection to include a sentence that is adjacent to the respective sentence in a first direction in accordance with the second subsequent movement of the contact.

In accordance with some embodiments, the respective sentence is selected in response to the fourth subsequent change in the characteristic intensity of the contact and the method further includes, while the respective sentence is selected: detecting a fifth subsequent change in the characteristic intensity of the contact above the respective intensity threshold; and, in response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, cancelling selection of the respective sentence.

In accordance with some embodiments, the method further includes, in response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets paragraph-selection criteria which include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period before the fifth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, expanding the selection to include the respective paragraph that contains the respective sentence.

In accordance with some embodiments, the method further includes, while the respective paragraph is selected, detecting third subsequent movement of the contact; and in response to detecting the third subsequent movement of the contact while the respective paragraph is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, expanding the selection to include a paragraph that is adjacent to the respective paragraph in a first direction in accordance with the third subsequent movement of the contact.

In accordance with some embodiments, the respective paragraph is selected in response to the fifth subsequent change in the characteristic intensity of the contact and the method further includes, while the respective paragraph is selected: detecting a sixth subsequent change in the characteristic intensity of the contact above the respective intensity threshold; and, in response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, cancelling selection of the respective paragraph.

In accordance with some embodiments, the method further includes, in response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets document selection criteria which include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period before the sixth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, expanding the selection to include the respective document that contains the respective paragraph.

In accordance with some embodiments, a method of content manipulation is performed at a portable multifunction device including one or more processors, memory, and a touch screen display. The method includes: displaying content of an electronic document and a cursor within the content on the touch screen display; displaying, on the touch screen display, a soft keyboard having multiple keys each having a respective alphanumeric character of a plurality of alphanumeric characters; detecting two substantially simultaneous touch inputs on the soft keyboard; and in response to detecting the two substantially simultaneous touch inputs on the soft keyboard, changing the appearance of the soft keyboard to a changed appearance.

In accordance with some embodiments, the method of content manipulation further includes: detecting, without breaking contact with the touch screen display following the two substantially simultaneous touch inputs, a sliding gesture from a first location of the two substantially touch inputs on the soft keyboard to a second location on the content; and in response to detecting the sliding gesture, maintaining the changed appearance of the soft keyboard.

In accordance with some embodiments, changing the appearance of the soft keyboard includes: removing the plurality of alphanumeric characters from the multiple keys, or changing one or more of: color, hue, saturation, brightness, or contrast of the soft keyboard based on the content of the electronic document.

In accordance with some embodiments, the method of content manipulation further includes: detecting a continuous movement of the two substantially simultaneous touch inputs from a first location on the soft keyboard to a second location anywhere on the touch screen display without breaking contact with the touch screen display; and expanding the selected content to include additional content beyond the portion in a direction towards the second location in response to detecting the continuous movement.

In accordance with some embodiments, expanding the selected content to include additional content beyond the portion in a direction towards the second location includes:

displaying a start-point object and an end-point object at respective ends of the selection; and moving one of the start-point object or the end-point object in accordance with the location of the first location and the second location. For example, the selection is expanded by moving a start-point object or an end-point object like dragging a cursor. The initial direction of the continuous movement of the two substantially simultaneous touch inputs defines what part of the selection is expanded. For example, a left/up movement of the two substantially simultaneous touch inputs drags a lollipop shaped start-point object and expands the selection backwards, while a right/down movement of the two substantially simultaneous touch inputs drags an upside down lollipop shaped end-point object and expands the selection forward.

In accordance with some embodiments, expanding the selected content to include additional content beyond the portion in a direction towards the second location includes: in accordance with a determination that the speed of the continuous movement exceeds a predetermined threshold, expanding the selection one word at a time.

In accordance with some embodiments, the method of content manipulation further includes: after detecting the two substantially simultaneous touch inputs, detecting a lift-off followed by an additional two substantially simultaneous touch inputs followed by a sliding gesture of the additional two substantially simultaneous touch inputs across the touch screen display to additional locations; dismissing the selected content; selecting a word as the selected content closest to the cursor; and expanding the selected content to include additional content beyond the selected content in a direction towards the additional locations.

In accordance with some embodiments, the method of content manipulation further includes: detecting an additional two substantially simultaneous touch inputs on the soft keyboard; and in response to detecting the additional two substantially simultaneous touch inputs on the soft keyboard: in accordance with a determination that the selected content is a word, expanding the selected content to include a sentence containing the word.

In accordance with some embodiments, the method of content manipulation further includes: in accordance with a determination that the selected content is more than a word, displaying the cursor at the beginning of the selected content and dismissing the selected content.

In accordance with some embodiments, the method of content manipulation further includes: detecting additional two substantially simultaneous touch inputs; in response to detecting the additional two substantially simultaneous touch inputs, expanding the selected content to a sentence containing the portion; and displaying an indication of the selected content.

In accordance with some embodiments, expanding the selected content to a sentence containing the portion includes expanding the selected content to the sentence containing the portion in accordance with a determination that the duration between the two substantially simultaneous touch inputs and the additional two substantially simultaneous touch inputs is less than a predetermined threshold (e.g., 0.66 seconds).

In accordance with some embodiments, the method of content manipulation further includes: detecting a further two substantially simultaneous touch inputs; in response to detecting the further two substantially simultaneous touch inputs, expanding the selected content to a paragraph containing the portion; and displaying an indication of the selected content.

In accordance with some embodiments, expanding the selected content to a paragraph containing the portion includes: expanding the selected content to the paragraph containing the portion in accordance with a determination that the duration between the two substantially simultaneous touch inputs and the further two substantially simultaneous touch inputs is less than a predetermined threshold (e.g., 0.66 seconds).

In accordance with some embodiments, there is provided an electronic device that includes a display, a touch-sensitive surface, one or more processors, memory, and one or more programs; the one or more programs are stored in the memory and configured to be executed by the one or more processors, where the one or more programs include instructions for performing any of the methods described herein.

In accordance with some embodiments there is provided a graphical user interface on an electronic device with a display, a touch-sensitive surface, a memory, and one or more processors to execute one or more programs stored in the memory. The graphical user interface includes one or more of the elements displayed in any of the methods described above, which are updated in response to inputs, as described in any of the methods described herein.

In accordance with some embodiments, there is provided a non-transitory computer readable storage medium that has stored therein instructions which when executed by an electronic device with a display, a touch-sensitive surface, cause the device to perform the any of the methods described herein.

In accordance with some embodiments, an electronic device includes a display unit configured to display content of an electronic document and a cursor within the electronic document; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect two substantially simultaneous touch inputs anywhere on the touch screen display; and in response to detecting the two substantially simultaneous touch inputs: select a portion of the content in the document closest to the cursor; and display the portion of the content as selected content.

In accordance with some embodiments, an electronic device includes a display unit configured to display content of an electronic document and a cursor at a current location within the content; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect two substantially simultaneous touch inputs at a first region on the touch screen display; upon determining that the two substantially simultaneous touch inputs remain in contact with the touch screen display, detect a continuous touch gesture from a location of the two substantially simultaneous touch inputs across the touch screen display from the first region to a second region; and in response to detecting the continuous touch gesture: move the cursor from the current location to a new location in a direction of the continuous touch gesture.

In accordance with some embodiments, an electronic device includes a display unit configured to display text and a cursor at a line within the text; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect a two-finger swipe gesture on the touch screen display in a

direction at least partially parallel to the line and towards an edge of the touch screen display; and in response to detecting the two-finger swipe gesture: move the cursor to a distal point of the text.

In accordance with some embodiments, an electronic device includes a display unit configured to display content of an electronic document and a cursor within the electronic document; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect a touch input on the touch screen display, wherein the touch input is located on a word within the content; and in response to detecting the touch input: select the word; and display a command display area adjacent to the selected word, wherein the second command display area includes an icon for cutting the selected word, an icon for copying the selected word, and an icon for pasting a previously selected content.

In accordance with some embodiments, an electronic device includes a display unit configured to display content of an electronic document and a selection of the content within the electronic document; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect a single touch input on the touch screen display at a location over the selection; in response to detecting the single touch input at the location, display a set of options related to the selection; determine if the single touch input remains at the location for a predetermined amount of time followed by a continuous touch gesture away from the location on the touch screen display; and in response to detecting the single touch input remaining at the location for the predetermined amount of time followed by the continuous touch gesture away from the location, move the selection to a different location in a direction of the continuous touch gesture.

In accordance with some embodiments, an electronic device includes a display unit configured to display content of an electronic document and a selection of the content within the electronic document; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect three substantially simultaneous touch inputs at locations anywhere on the touch screen display; determine if the three substantially simultaneous touch inputs is followed by three continuous touch gestures away from the locations on the touch screen display; and in response to detecting the three continuous touch gestures, move the selection to a different location in a direction of the continuous touch gestures.

In accordance with some embodiments, an electronic device includes a display unit configured to display content of an electronic document, the content includes at least one line of text comprising at least two words; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect a touch input on the content; and in response to detecting the touch input: determine a distance of the touch input to a closest space between the two words within the electronic document; and in accordance with a determination that the distance is greater than a predetermined threshold distance, select a word within the electronic document closest to the touch input and display an indication of the selection.

In accordance with some embodiments, an electronic device includes a display unit configured to display content of an electronic document and a soft keyboard; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect two substantially simultaneous touch inputs on the soft keyboard; and in response to detecting the two substantially simultaneous touch inputs on the soft keyboard, display a blurred soft keyboard.

In accordance with some embodiments, an electronic device includes a touch-sensitive surface unit configured to receive user touch inputs, a display unit configured to concurrently display an onscreen keyboard and a content presentation region on the touch-sensitive display unit, wherein the content presentation region displays text input received from the onscreen keyboard; a touch-sensitive surface unit configured to receive user touch inputs; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect a touch input on the onscreen keyboard displayed on the touch-sensitive display; in response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display, determine whether the touch input satisfies one or more criteria for entering a text selection mode; and in accordance with a determination that the touch input satisfies the one or more criteria for entering the text selection mode: concurrently display, in the content presentation region, a first cursor at a first location and a second cursor at a second location that is different from the first location.

In accordance with some embodiments, an electronic device includes a touch-sensitive surface unit configured to receive user touch inputs; a display unit configured to, while a contact is detected on the touch-sensitive surface unit, concurrently display on the display unit content and a text selection indicator at a first location within the content; one or more sensors to detect intensity of contacts with the touch-sensitive surface unit; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: detect a first press input by the contact followed by movement of the contact across the touch-sensitive surface unit that corresponds to movement of at least a portion of the text selection indicator from the first location to a second location on the display unit; in response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface unit, select content between the first location and the second location; while the content between the first location and the second location is selected, detect a second press input by the contact on the touch-sensitive surface unit; in response to detecting the second press input by the contact on the touch-sensitive surface unit, perform a text selection operation, associated with the content between the first location and the second location, in accordance with the second press input, wherein the contact in the first press input, the movement across the touch-sensitive surface unit, and the second press input is a single continuous contact with the touch-sensitive surface unit.

In accordance with some embodiments, an electronic device includes a touch-sensitive surface unit configured to receive user touch inputs; a display unit configured to concurrently display an onscreen keyboard and a content presentation region on the touch-sensitive display unit, wherein the content presentation region displays text input received from the onscreen keyboard; one or more sensors to detect intensity of contacts with the touch-sensitive surface unit; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is

configured to: detect a touch input on the onscreen keyboard displayed on the touch-sensitive display unit, wherein detecting the touch input includes detecting movement of a contact and liftoff of the contact; in response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display: in accordance with a determination that the touch input satisfies text-selection criteria, wherein the text-selection criteria include a criterion that is met when a characteristic intensity of the contact increases above a text-selection intensity threshold, perform a text selection operation based on the movement of the contact; and in accordance with a determination that the touch input satisfies text-entry criteria, wherein the text-entry criteria include a criterion that is met when the characteristic intensity of the contact does not increase above the text-selection intensity threshold, enter text into the content presentation region based on the touch input.

In accordance with some embodiments, there is provided an electronic device that includes a display unit configured to display content of an electronic document and a cursor within the electronic document; a touch-sensitive surface unit configured to receive user contacts; and a processing unit coupled to the display unit and the touch-sensitive surface unit. The processing unit is configured to: display, on the touch-sensitive surface display unit, a soft keyboard having multiple keys each having a respective alphanumeric character of a plurality of alphanumeric characters; detect two substantially simultaneous touch inputs on the soft keyboard; and in response to detecting the two substantially simultaneous touch inputs on the soft keyboard, change the appearance of the soft keyboard to a changed appearance.

Thus, electronic devices with displays, touch-sensitive surfaces are provided with faster, more efficient methods and interfaces for cursor manipulation, thereby increasing the effectiveness, efficiency, and user satisfaction with such devices. Such methods and interfaces may complement or replace conventional methods for cursor manipulation.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the various described embodiments, reference should be made to the Description of Embodiments below, in conjunction with the following drawings in which like reference numerals refer to corresponding parts throughout the figures.

FIG. **1**A is a block diagram illustrating a portable multifunction device with a touch-sensitive display in accordance with some embodiments.

FIG. **1**B is a block diagram illustrating exemplary components for event handling, in accordance with some embodiments.

FIG. **2**A is a schematic diagram of a portable multifunction device having a touch screen, in accordance with some embodiments.

FIG. **2**B illustrates an exemplary user interface for a multifunction device with a touch-sensitive surface that is separate from the display in accordance with some embodiments.

FIGS. **2**C-**2**E illustrate exemplary dynamic intensity thresholds in accordance with some embodiments.

FIG. **3** is a schematic diagram of a user interface for a menu of applications on a portable multifunction device, in accordance with some embodiments.

FIG. **4**A is a flow chart illustrating a method of cursor manipulation with two substantially simultaneous touch inputs, in accordance with some embodiments.

FIG. **4**B is a flow chart illustrating a method of cursor manipulation with a single touch input, in accordance with some embodiments.

FIG. **4**C is a flow chart illustrating a method of cursor manipulation with three substantially simultaneous touch inputs (e.g., three finger touch input), in accordance with some embodiments.

FIGS. **5**A-**5**AX illustrate exemplary user interfaces for cursor manipulation, in accordance with some embodiments.

FIGS. **6**A-**6**J illustrate exemplary user interfaces for cursor manipulation with a single touch input, in accordance with some embodiments.

FIGS. **7**A-**7**C illustrate exemplary keyboard appearance changes in response to two substantially simultaneous touch inputs, in accordance with some embodiments.

FIG. **8** is a functional block diagram of an electronic device in accordance with some embodiments.

FIGS. **9**A-**9**AD illustrate exemplary user interfaces for manipulating a cursor and selecting content in accordance with some embodiments.

FIGS. **10**A-**10**G are flow diagrams illustrating a method of manipulating a cursor in accordance with some embodiments.

FIGS. **11**A-**11**F are flow diagrams illustrating a method of selecting content in accordance with some embodiments.

FIG. **12** is a functional block diagram of an electronic device in accordance with some embodiments.

FIGS. **13**A-**13**Q illustrate exemplary user interfaces for manipulating a cursor and selecting content in accordance with some embodiments.

FIGS. **14**A-**14**H are flow diagrams illustrating a method of manipulating a cursor and selecting content in accordance with some embodiments.

FIG. **15** is a functional block diagram of an electronic device in accordance with some embodiments.

DESCRIPTION OF EMBODIMENTS

Described below are devices and methods that allow a user to efficiently manipulate a cursor in an electronic document. The methods are particularly useful on portable devices with small displays, including handheld or pocket-sized devices (e.g., smartphones). When using conventional portable devices, a user may find it difficult to precisely place her finger (or make contact) at the cursor location on the touch screen display, as the cursor is often small, hidden under the user's finger, and/or disposed between text or graphics. As such, users often need to lift their finger and reposition it multiple times until the cursor is placed at the correct location. This conventional process is time consuming, inefficient, and alienates users. The methods described herein allow a user to manipulate and place a cursor at a desired location within an electronic document, as well as perform certain editing functions, such as text selection or moving text. In some embodiments, this cursor (or selected text) manipulation can be controlled from any part of the touch-sensitive surface, not just the location of the cursor. These methods greatly reduce the number of steps that a user need perform to navigate and edit a document, thereby increasing efficiency and ease of use when performing these tasks.

Below, FIGS. **1**A-**1**B, **2**A-**2**B, and **3** provide a description of exemplary devices. FIGS. **5**A-**5**AR illustrate exemplary user interfaces for cursor manipulation when editing an electronic document. FIGS. **4**A-**4**C are flow charts illustrating methods of cursor manipulation. The user interfaces in

FIGS. **5**A-**5**AX, **6**A-**6**J, **7**A-**7**C, **9**A-**9**AD, and **13**A-**13**Q are used to illustrate the processes in FIGS. **4**A-**4**C, **10**A-**10**G, **11**A-**11**F, **14**A-**14**H and the method recited in the claims.

Exemplary Devices

Reference will now be made in detail to embodiments, examples of which are illustrated in the accompanying drawings. In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be apparent to one of ordinary skill in the art that the present invention may be practiced without these specific details. In other instances, well-known methods, procedures, components, circuits, and networks have not been described in detail so as not to unnecessarily obscure aspects of the embodiments.

It will also be understood that, although the terms first, second, etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are only used to distinguish one element from another. For example, a first contact could be termed a second contact, and, similarly, a second contact could be termed a first contact, without departing from the scope of the present invention. The first contact and the second contact are both contacts, but they are not the same contact.

The terminology used in the description of the invention herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used in the description of the invention and the appended claims, the singular forms "a", "an" and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term "and/or" as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be further understood that the terms "comprises" and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

As used herein, the term "if" may be construed to mean "when" or "upon" or "in response to determining" or "in response to detecting," depending on the context. Similarly, the phrase "if it is determined" or "if [a stated condition or event] is detected" may be construed to mean "upon determining" or "in response to determining" or "upon detecting [the stated condition or event]" or "in response to detecting [the stated condition or event]," depending on the context.

Embodiments of computing devices, user interfaces for such devices, and associated processes for using such devices are described. In some embodiments, the computing device is a portable communications device such as a mobile telephone that also contains other functions, such as PDA and/or music player functions. Exemplary embodiments of portable multifunction devices include, without limitation, the IPHONE, IPAD, and IPOD TOUCH devices from Apple Computer, Inc. of Cupertino, Calif.

In the discussion that follows, a computing device that includes a touch-sensitive display is described. It should be understood, however, that the computing device may include one or more other physical user-interface devices, such as a separate display, physical keyboard, a mouse, and/or a joystick.

The device supports a variety of applications, such as one or more of the following: a note taking application, a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video-conferencing application, an e-mail application, an instant messaging application, a fitness application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, a digital video player application, and/or a home automation application.

The various applications that may be executed on the device may use at least one common physical user-interface device, such as the touch-sensitive surface. One or more functions of the touch-sensitive surface as well as corresponding information displayed on the device may be adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch-sensitive surface) of the device may support the variety of applications with user interfaces that are intuitive and transparent.

The user interfaces may include one or more soft keyboard embodiments. The soft keyboard embodiments may include standard (QWERTY) and/or non-standard configurations of symbols on the displayed icons of the keyboard, such as those described in U.S. patent application Ser. No. 11/459,606, "Keyboards For Portable Electronic Devices," filed Jul. 24, 2006, and Ser. No. 11/459,615, "Touch Screen Keyboards For Portable Electronic Devices," filed Jul. 24, 2006, the contents of which are hereby incorporated by reference in their entirety. The keyboard embodiments may include a reduced number of icons (or soft keys) relative to the number of keys in existing physical keyboards, such as that for a typewriter. This may make it easier for users to select one or more icons in the keyboard, and thus, one or more corresponding symbols. The keyboard embodiments may be adaptive. For example, displayed icons may be modified in accordance with user actions, such as selecting one or more icons and/or one or more corresponding symbols. One or more applications on the device may utilize common and/or different keyboard embodiments. Thus, the keyboard embodiment used may be tailored to at least some of the applications. In some embodiments, one or more keyboard embodiments may be tailored to a respective user. For example, one or more keyboard embodiments may be tailored to a respective user based on a word usage history (lexicography, slang, individual usage) of the respective user. Some of the keyboard embodiments may be adjusted to reduce a probability of a user error when selecting one or more icons, and thus one or more symbols, when using the soft keyboard embodiments.

Attention is now directed toward embodiments of portable devices with touch-sensitive displays. FIG. **1**A is a block diagram illustrating portable multifunction device **100** with touch-sensitive display system **112** in accordance with some embodiments. Touch-sensitive display system **112** is sometimes called a "touch screen" for convenience, and is sometimes simply called a touch-sensitive display. Device **100** includes memory **102** (which optionally includes one or more computer readable storage mediums), memory controller **122**, one or more processing units (CPUs) **120**, peripherals interface **118**, RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, input/output (I/O) subsystem **106**, other input or control devices **116**, and external port **124**. Device **100** optionally includes one or more optical sensors **164**. Device **100** optionally includes one or more intensity sensors **165** for detecting intensity of contacts on device **100** (e.g., a touch-sensitive surface such as touch-

sensitive display system **112** of device **100**). Device **100** optionally includes one or more tactile output generators **167** for generating tactile outputs on device **100** (e.g., generating tactile outputs on a touch-sensitive surface such as touch-sensitive display system **112** of device **100** or touchpad **355** of device **300**). These components optionally communicate over one or more communication buses or signal lines **103**.

As used in the specification and claims, the term "tactile output" refers to physical displacement of a device relative to a previous position of the device, physical displacement of a component (e.g., a touch-sensitive surface) of a device relative to another component (e.g., housing) of the device, or displacement of the component relative to a center of mass of the device that will be detected by a user with the user's sense of touch. For example, in situations where the device or the component of the device is in contact with a surface of a user that is sensitive to touch (e.g., a finger, palm, or other part of a user's hand), the tactile output generated by the physical displacement will be interpreted by the user as a tactile sensation corresponding to a perceived change in physical characteristics of the device or the component of the device. For example, movement of a touch-sensitive surface (e.g., a touch-sensitive display or trackpad) is, optionally, interpreted by the user as a "down click" or "up click" of a physical actuator button. In some cases, a user will feel a tactile sensation such as an "down click" or "up click" even when there is no movement of a physical actuator button associated with the touch-sensitive surface that is physically pressed (e.g., displaced) by the user's movements. As another example, movement of the touch-sensitive surface is, optionally, interpreted or sensed by the user as "roughness" of the touch-sensitive surface, even when there is no change in smoothness of the touch-sensitive surface. While such interpretations of touch by a user will be subject to the individualized sensory perceptions of the user, there are many sensory perceptions of touch that are common to a large majority of users. Thus, when a tactile output is described as corresponding to a particular sensory perception of a user (e.g., an "up click," a "down click," "roughness"), unless otherwise stated, the generated tactile output corresponds to physical displacement of the device or a component thereof that will generate the described sensory perception for a typical (or average) user.

It should be appreciated that device **100** is only one example of a portable multifunction device, and that device **100** optionally has more or fewer components than shown, optionally combines two or more components, or optionally has a different configuration or arrangement of the components. The various components shown in FIG. **1**A are implemented in hardware, software, firmware, or a combination thereof, including one or more signal processing and/or application specific integrated circuits.

Memory **102** optionally includes high-speed random access memory and optionally also includes non-volatile memory, such as one or more magnetic disk storage devices, flash memory devices, or other non-volatile solid-state memory devices. Access to memory **102** by other components of device **100**, such as CPU(s) **120** and the peripherals interface **118**, is, optionally, controlled by memory controller **122**.

Peripherals interface **118** can be used to couple input and output peripherals of the device to CPU(s) **120** and memory **102**. The one or more processors **120** run or execute various software programs and/or sets of instructions stored in memory **102** to perform various functions for device **100** and to process data.

In some embodiments, peripherals interface **118**, CPU(s) **120**, and memory controller **122** are, optionally, implemented on a single chip, such as chip **104**. In some other embodiments, they are, optionally, implemented on separate chips.

RF (radio frequency) circuitry **108** receives and sends RF signals, also called electromagnetic signals. RF circuitry **108** converts electrical signals to/from electromagnetic signals and communicates with communications networks and other communications devices via the electromagnetic signals. RF circuitry **108** optionally includes well-known circuitry for performing these functions, including but not limited to an antenna system, an RF transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a CODEC chipset, a subscriber identity module (SIM) card, memory, and so forth. RF circuitry **108** optionally communicates with networks, such as the Internet, also referred to as the World Wide Web (WWW), an intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN), and other devices by wireless communication. The wireless communication optionally uses any of a plurality of communications standards, protocols and technologies, including but not limited to Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), Evolution, Data-Only (EV-DO), HSPA, HSPA+, Dual-Cell HSPA (DC-HSPDA), long term evolution (LTE), near field communication (NFC), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a, IEEE 802.11ac, IEEE 802.11ax, IEEE 802.11b, IEEE 802.11g and/or IEEE 802.11n), voice over Internet Protocol (VoIP), Wi-MAX, a protocol for e-mail (e.g., Internet message access protocol (IMAP) and/or post office protocol (POP)), instant messaging (e.g., extensible messaging and presence protocol (XMPP), Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions (SIMPLE), Instant Messaging and Presence Service (IMPS)), and/or Short Message Service (SMS), or any other suitable communication protocol, including communication protocols not yet developed as of the filing date of this document.

Audio circuitry **110**, speaker **111**, and microphone **113** provide an audio interface between a user and device **100**. Audio circuitry **110** receives audio data from peripherals interface **118**, converts the audio data to an electrical signal, and transmits the electrical signal to speaker **111**. Speaker **111** converts the electrical signal to human-audible sound waves. Audio circuitry **110** also receives electrical signals converted by microphone **113** from sound waves. Audio circuitry **110** converts the electrical signal to audio data and transmits the audio data to peripherals interface **118** for processing. Audio data is, optionally, retrieved from and/or transmitted to memory **102** and/or RF circuitry **108** by peripherals interface **118**. In some embodiments, audio circuitry **110** also includes a headset jack (e.g., **212**, FIG. **2**A). The headset jack provides an interface between audio circuitry **110** and removable audio input/output peripherals, such as output-only headphones or a headset with both output (e.g., a headphone for one or both ears) and input (e.g., a microphone).

I/O subsystem **106** couples input/output peripherals on device **100**, such as touch-sensitive display system **112** and other input or control devices **116**, with peripherals interface **118**. I/O subsystem **106** optionally includes display control-

ler **156**, optical sensor controller **158**, intensity sensor controller **159**, haptic feedback controller **161**, and one or more input controllers **160** for other input or control devices. The one or more input controllers **160** receive/send electrical signals from/to other input or control devices **116**. The other input or control devices **116** optionally include physical buttons (e.g., push buttons, rocker buttons, etc.), dials, slider switches, joysticks, click wheels, and so forth. In some alternate embodiments, input controller(s) **160** are, optionally, coupled with any (or none) of the following: a keyboard, infrared port, USB port, stylus, and/or a pointer device such as a mouse. The one or more buttons (e.g., **208**, FIG. **2**A) optionally include an up/down button for volume control of speaker **111** and/or microphone **113**. The one or more buttons optionally include a push button (e.g., **206**, FIG. **2**A).

Touch-sensitive display system **112** provides an input interface and an output interface between the device and a user. Display controller **156** receives and/or sends electrical signals from/to touch-sensitive display system **112**. Touch-sensitive display system **112** displays visual output to the user. The visual output optionally includes graphics, text, icons, video, and any combination thereof (collectively termed "graphics"). In some embodiments, some or all of the visual output corresponds to user-interface objects. As used herein, the term "affordance" refers to a user-interactive graphical user interface object (e.g., a graphical user interface object that is configured to respond to inputs directed toward the graphical user interface object). Examples of user-interactive graphical user interface objects include, without limitation, a button, slider, icon, selectable menu item, switch, hyperlink, or other user interface control.

Touch-sensitive display system **112** has a touch-sensitive surface, sensor or set of sensors that accepts input from the user based on haptic and/or tactile contact. Touch-sensitive display system **112** and display controller **156** (along with any associated modules and/or sets of instructions in memory **102**) detect contact (and any movement or breaking of the contact) on touch-sensitive display system **112** and converts the detected contact into interaction with user-interface objects (e.g., one or more soft keys, icons, web pages or images) that are displayed on touch-sensitive display system **112**. In an exemplary embodiment, a point of contact between touch-sensitive display system **112** and the user corresponds to a finger of the user or a stylus.

Touch-sensitive display system **112** optionally uses LCD (liquid crystal display) technology, LPD (light emitting polymer display) technology, or LED (light emitting diode) technology, although other display technologies are used in other embodiments. Touch-sensitive display system **112** and display controller **156** optionally detect contact and any movement or breaking thereof using any of a plurality of touch sensing technologies now known or later developed, including but not limited to capacitive, resistive, infrared, and surface acoustic wave technologies, as well as other proximity sensor arrays or other elements for determining one or more points of contact with touch-sensitive display system **112**. In an exemplary embodiment, projected mutual capacitance sensing technology is used, such as that found in the iPhone®, iPod Touch®, and iPad® from Apple Inc. of Cupertino, Calif.

Touch-sensitive display system **112** optionally has a video resolution in excess of 100 dpi. In some embodiments, the touch screen video resolution is in excess of 400 dpi (e.g., 500 dpi, 800 dpi, or greater). The user optionally makes contact with touch-sensitive display system **112** using any suitable object or appendage, such as a stylus, a finger, and so forth. In some embodiments, the user interface is designed to work with finger-based contacts and gestures, which can be less precise than stylus-based input due to the larger area of contact of a finger on the touch screen. In some embodiments, the device translates the rough finger-based input into a precise pointer/cursor position or command for performing the actions desired by the user.

In some embodiments, in addition to the touch screen, device **100** optionally includes a touchpad (not shown) for activating or deactivating particular functions. In some embodiments, the touchpad is a touch-sensitive area of the device that, unlike the touch screen, does not display visual output. The touchpad is, optionally, a touch-sensitive surface that is separate from touch-sensitive display system **112** or an extension of the touch-sensitive surface formed by the touch screen.

Device **100** also includes power system **162** for powering the various components. Power system **162** optionally includes a power management system, one or more power sources (e.g., battery, alternating current (AC)), a recharging system, a power failure detection circuit, a power converter or inverter, a power status indicator (e.g., a light-emitting diode (LED)) and any other components associated with the generation, management and distribution of power in portable devices.

Device **100** optionally also includes one or more optical sensors **164**. FIG. **1**A shows an optical sensor coupled with optical sensor controller **158** in I/O subsystem **106**. Optical sensor(s) **164** optionally include charge-coupled device (CCD) or complementary metal-oxide semiconductor (CMOS) phototransistors. Optical sensor(s) **164** receive light from the environment, projected through one or more lens, and converts the light to data representing an image. In conjunction with imaging module **143** (also called a camera module), optical sensor(s) **164** optionally capture still images and/or video. In some embodiments, an optical sensor is located on the back of device **100**, opposite touch-sensitive display system **112** on the front of the device, so that the touch screen is enabled for use as a viewfinder for still and/or video image acquisition. In some embodiments, another optical sensor is located on the front of the device so that the user's image is obtained (e.g., for selfies, for videoconferencing while the user views the other video conference participants on the touch screen, etc.).

Device **100** optionally also includes one or more contact intensity sensors **165**. FIG. **1**A shows a contact intensity sensor coupled with intensity sensor controller **159** in I/O subsystem **106**. Contact intensity sensor(s) **165** optionally include one or more piezoresistive strain gauges, capacitive force sensors, electric force sensors, piezoelectric force sensors, optical force sensors, capacitive touch-sensitive surfaces, or other intensity sensors (e.g., sensors used to measure the force (or pressure) of a contact on a touch-sensitive surface). Contact intensity sensor(s) **165** receive contact intensity information (e.g., pressure information or a proxy for pressure information) from the environment. In some embodiments, at least one contact intensity sensor is collocated with, or proximate to, a touch-sensitive surface (e.g., touch-sensitive display system **112**). In some embodiments, at least one contact intensity sensor is located on the back of device **100**, opposite touch-screen display system **112** which is located on the front of device **100**.

Device **100** optionally also includes one or more proximity sensors **166**. FIG. **1**A shows proximity sensor **166** coupled with peripherals interface **118**. Alternately, proximity sensor **166** is coupled with input controller **160** in I/O subsystem **106**. In some embodiments, the proximity sensor

turns off and disables touch-sensitive display system **112** when the multifunction device is placed near the user's ear (e.g., when the user is making a phone call).

Device **100** optionally also includes one or more tactile output generators **167**. FIG. **1**A shows a tactile output generator coupled with haptic feedback controller **161** in I/O subsystem **106**. Tactile output generator(s) **167** optionally include one or more electroacoustic devices such as speakers or other audio components and/or electromechanical devices that convert energy into linear motion such as a motor, solenoid, electroactive polymer, piezoelectric actuator, electrostatic actuator, or other tactile output generating component (e.g., a component that converts electrical signals into tactile outputs on the device). Tactile output generator(s) **167** receive tactile feedback generation instructions from haptic feedback module **133** and generates tactile outputs on device **100** that are capable of being sensed by a user of device **100**. In some embodiments, at least one tactile output generator is collocated with, or proximate to, a touch-sensitive surface (e.g., touch-sensitive display system **112**) and, optionally, generates a tactile output by moving the touch-sensitive surface vertically (e.g., in/out of a surface of device **100**) or laterally (e.g., back and forth in the same plane as a surface of device **100**). In some embodiments, at least one tactile output generator sensor is located on the back of device **100**, opposite touch-sensitive display system **112**, which is located on the front of device **100**.

Device **100** optionally also includes one or more accelerometers **168**. FIG. **1**A shows accelerometer **168** coupled with peripherals interface **118**. Alternately, accelerometer **168** is, optionally, coupled with an input controller **160** in I/O subsystem **106**. In some embodiments, information is displayed on the touch-screen display in a portrait view or a landscape view based on an analysis of data received from the one or more accelerometers. Device **100** optionally includes, in addition to accelerometer(s) **168**, a magnetometer (not shown) and a GPS (or GLONASS or other global navigation system) receiver (not shown) for obtaining information concerning the location and orientation (e.g., portrait or landscape) of device **100**.

In some embodiments, the software components stored in memory **102** include operating system **126**, communication module (or set of instructions) **128**, contact/motion module (or set of instructions) **130**, graphics module (or set of instructions) **132**, haptic feedback module (or set of instructions) **133**, text input module (or set of instructions) **134**, Global Positioning System (GPS) module (or set of instructions) **135**, and applications (or sets of instructions) **136**. Furthermore, in some embodiments, memory **102** stores device/global internal state **157**, as shown in FIGS. **1**A and **3**. Device/global internal state **157** includes one or more of: active application state, indicating which applications, if any, are currently active; display state, indicating what applications, views or other information occupy various regions of touch-sensitive display system **112**; sensor state, including information obtained from the device's various sensors and other input or control devices **116**; and location and/or positional information concerning the device's location and/or attitude.

Operating system **126** (e.g., iOS, Darwin, RTXC, LINUX, UNIX, OS X, WINDOWS, or an embedded operating system such as VxWorks) includes various software components and/or drivers for controlling and managing general system tasks (e.g., memory management, storage device control, power management, etc.) and facilitates communication between various hardware and software components.

Communication module **128** facilitates communication with other devices over one or more external ports **124** and also includes various software components for handling data received by RF circuitry **108** and/or external port **124**. External port **124** (e.g., Universal Serial Bus (USB), FIREWIRE, etc.) is adapted for coupling directly to other devices or indirectly over a network (e.g., the Internet, wireless LAN, etc.). In some embodiments, the external port is a multi-pin (e.g., 30-pin) connector that is the same as, or similar to and/or compatible with the 30-pin connector used in some iPhone®, iPod Touch®, and iPad® devices from Apple Inc. of Cupertino, Calif. In some embodiments, the external port is a Lightning connector that is the same as, or similar to and/or compatible with the Lightning connector used in some iPhone®, iPod Touch®, and iPad® devices from Apple Inc. of Cupertino, Calif.

Contact/motion module **130** optionally detects contact with touch-sensitive display system **112** (in conjunction with display controller **156**) and other touch-sensitive devices (e.g., a touchpad or physical click wheel). Contact/motion module **130** includes various software components for performing various operations related to detection of contact (e.g., by a finger or by a stylus), such as determining if contact has occurred (e.g., detecting a finger-down event), determining an intensity of the contact (e.g., the force or pressure of the contact or a substitute for the force or pressure of the contact), determining if there is movement of the contact and tracking the movement across the touch-sensitive surface (e.g., detecting one or more finger-dragging events), and determining if the contact has ceased (e.g., detecting a finger-up event or a break in contact). Contact/motion module **130** receives contact data from the touch-sensitive surface. Determining movement of the point of contact, which is represented by a series of contact data, optionally includes determining speed (magnitude), velocity (magnitude and direction), and/or an acceleration (a change in magnitude and/or direction) of the point of contact. These operations are, optionally, applied to single contacts (e.g., one finger contacts or stylus contacts) or to multiple simultaneous contacts (e.g., "multitouch"/multiple finger contacts). In some embodiments, contact/motion module **130** and display controller **156** detect contact on a touchpad.

Contact/motion module **130** optionally detects a gesture input by a user. Different gestures on the touch-sensitive surface have different contact patterns (e.g., different motions, timings, and/or intensities of detected contacts). Thus, a gesture is, optionally, detected by detecting a particular contact pattern. For example, detecting a finger tap gesture includes detecting a finger-down event followed by detecting a finger-up (lift off) event at the same position (or substantially the same position) as the finger-down event (e.g., at the position of an icon). As another example, detecting a finger swipe gesture on the touch-sensitive surface includes detecting a finger-down event followed by detecting one or more finger-dragging events, and subsequently followed by detecting a finger-up (lift off) event. Similarly, tap, swipe, drag, and other gestures are optionally detected for a stylus by detecting a particular contact pattern for the stylus.

Graphics module **132** includes various known software components for rendering and displaying graphics on touch-sensitive display system **112** or other display, including components for changing the visual impact (e.g., brightness, transparency, saturation, contrast or other visual property) of graphics that are displayed. As used herein, the term "graphics" includes any object that can be displayed to a user, including without limitation text, web pages, icons (such as

user-interface objects including soft keys), digital images, videos, animations and the like.

In some embodiments, graphics module **132** stores data representing graphics to be used. Each graphic is, optionally, assigned a corresponding code. Graphics module **132** receives, from applications etc., one or more codes specifying graphics to be displayed along with, if necessary, coordinate data and other graphic property data, and then generates screen image data to output to display controller **156**.

Haptic feedback module **133** includes various software components for generating instructions used by tactile output generator(s) **167** to produce tactile outputs at one or more locations on device **100** in response to user interactions with device **100**.

Text input module **134**, which is, optionally, a component of graphics module **132**, provides soft keyboards for entering text in various applications (e.g., contacts **137**, e-mail **140**, IM **141**, browser **147**, and any other application that needs text input).

GPS module **135** determines the location of the device and provides this information for use in various applications (e.g., to telephone **138** for use in location-based dialing, to camera **143** as picture/video metadata, and to applications that provide location-based services such as weather widgets, local yellow page widgets, and map/navigation widgets).

Applications **136** optionally include the following modules (or sets of instructions), or a subset or superset thereof:

- contacts module **137** (sometimes called an address book or contact list);
- telephone module **138**;
- video conferencing module **139**;
- e-mail client module **140**;
- instant messaging (IM) module **141**;
- workout support module **142**;
- camera module **143** for still and/or video images;
- image management module **144**;
- browser module **147**;
- calendar module **148**;
- widget modules **149**, which optionally include one or more of: weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, dictionary widget **149-5**, and other widgets obtained by the user, as well as user-created widgets **149-6**;
- widget creator module **150** for making user-created widgets **149-6**;
- search module **151**;
- video and music player module **152**, which is, optionally, made up of a video player module and a music player module;
- notes module **153**;
- map module **154**; and/or
- online video module **155**.

Examples of other applications **136** that are, optionally, stored in memory **102** include other word processing applications, other image editing applications, drawing applications, presentation applications, JAVA-enabled applications, encryption, digital rights management, voice recognition, and voice replication.

In conjunction with touch-sensitive display system **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, contacts module **137** includes executable instructions to manage an address book or contact list (e.g., stored in application internal state **192** of contacts module **137** in memory **102** or memory **370**), including: adding name(s) to the address book; deleting name(s) from the address book; associating telephone number(s), e-mail address(es), physical address(es) or other information with a name; associating an image with a name; categorizing and sorting names; providing telephone numbers and/or e-mail addresses to initiate and/or facilitate communications by telephone **138**, video conference **139**, e-mail **140**, or IM **141**; and so forth.

In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch-sensitive display system **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, telephone module **138** includes executable instructions to enter a sequence of characters corresponding to a telephone number, access one or more telephone numbers in address book **137**, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation and disconnect or hang up when the conversation is completed. As noted above, the wireless communication optionally uses any of a plurality of communications standards, protocols and technologies.

In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch-sensitive display system **112**, display controller **156**, optical sensor(s) **164**, optical sensor controller **158**, contact module **130**, graphics module **132**, text input module **134**, contact list **137**, and telephone module **138**, videoconferencing module **139** includes executable instructions to initiate, conduct, and terminate a video conference between a user and one or more other participants in accordance with user instructions.

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, e-mail client module **140** includes executable instructions to create, send, receive, and manage e-mail in response to user instructions. In conjunction with image management module **144**, e-mail client module **140** makes it very easy to create and send e-mails with still or video images taken with camera module **143**.

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, the instant messaging module **141** includes executable instructions to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, Apple Push Notification Service (APNs) or IMPS for Internet-based instant messages), to receive instant messages and to view received instant messages. In some embodiments, transmitted and/or received instant messages optionally include graphics, photos, audio files, video files and/or other attachments as are supported in a MMS and/or an Enhanced Messaging Service (EMS). As used herein, "instant messaging" refers to both telephony-based messages (e.g., messages sent using SMS or MMS) and Internet-based messages (e.g., messages sent using XMPP, SIMPLE, APNs, or IMPS).

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display controller **156**, contact module **130**, graphics module **132**, text input module **134**, GPS module **135**, map module **154**, and music player module **146**, workout support module **142** includes executable instructions to create workouts (e.g., with time, distance, and/or calorie burning goals); communicate with workout sensors (in sports devices and smart watches); receive workout sensor data; calibrate sensors used to monitor a

workout; select and play music for a workout; and display, store and transmit workout data.

In conjunction with touch-sensitive display system **112**, display controller **156**, optical sensor(s) **164**, optical sensor controller **158**, contact module **130**, graphics module **132**, and image management module **144**, camera module **143** includes executable instructions to capture still images or video (including a video stream) and store them into memory **102**, modify characteristics of a still image or video, and/or delete a still image or video from memory **102**.

In conjunction with touch-sensitive display system **112**, display controller **156**, contact module **130**, graphics module **132**, text input module **134**, and camera module **143**, image management module **144** includes executable instructions to arrange, modify (e.g., edit), or otherwise manipulate, label, delete, present (e.g., in a digital slide show or album), and store still and/or video images.

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, and text input module **134**, browser module **147** includes executable instructions to browse the Internet in accordance with user instructions, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages.

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, text input module **134**, e-mail client module **140**, and browser module **147**, calendar module **148** includes executable instructions to create, display, modify, and store calendars and data associated with calendars (e.g., calendar entries, to do lists, etc.) in accordance with user instructions.

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, text input module **134**, and browser module **147**, widget modules **149** are mini-applications that are, optionally, downloaded and used by a user (e.g., weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, and dictionary widget **149-5**) or created by the user (e.g., user-created widget **149-6**). In some embodiments, a widget includes an HTML (Hypertext Markup Language) file, a CSS (Cascading Style Sheets) file, and a JavaScript file. In some embodiments, a widget includes an XML (Extensible Markup Language) file and a JavaScript file (e.g., Yahoo! Widgets).

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, text input module **134**, and browser module **147**, the widget creator module **150** includes executable instructions to create widgets (e.g., turning a user-specified portion of a web page into a widget).

In conjunction with touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, and text input module **134**, search module **151** includes executable instructions to search for text, music, sound, image, video, and/or other files in memory **102** that match one or more search criteria (e.g., one or more user-specified search terms) in accordance with user instructions.

In conjunction with touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, audio circuitry **110**, speaker **111**, RF circuitry **108**, and browser module **147**, video and music player module **152** includes executable instructions that allow the user to download and play back recorded music and other sound files stored in one or more file formats, such as MP3 or AAC files, and executable instructions to display, present or otherwise play back videos (e.g., on touch-sensitive display system **112**, or on an external display connected wirelessly or via external port **124**). In some embodiments, device **100** optionally includes the functionality of an MP3 player, such as an iPod (trademark of Apple Inc.).

In conjunction with touch-sensitive display system **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, notes module **153** includes executable instructions to create and manage notes, to do lists, and the like in accordance with user instructions.

In conjunction with RF circuitry **108**, touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, text input module **134**, GPS module **135**, and browser module **147**, map module **154** includes executable instructions to receive, display, modify, and store maps and data associated with maps (e.g., driving directions; data on stores and other points of interest at or near a particular location; and other location-based data) in accordance with user instructions.

In conjunction with touch-sensitive display system **112**, display system controller **156**, contact module **130**, graphics module **132**, audio circuitry **110**, speaker **111**, RF circuitry **108**, text input module **134**, e-mail client module **140**, and browser module **147**, online video module **155** includes executable instructions that allow the user to access, browse, receive (e.g., by streaming and/or download), play back (e.g., on the touch screen **112**, or on an external display connected wirelessly or via external port **124**), send an e-mail with a link to a particular online video, and otherwise manage online videos in one or more file formats, such as H.264. In some embodiments, instant messaging module **141**, rather than e-mail client module **140**, is used to send a link to a particular online video.

Each of the above identified modules and applications correspond to a set of executable instructions for performing one or more functions described above and the methods described in this application (e.g., the computer-implemented methods and other information processing methods described herein). These modules (i.e., sets of instructions) need not be implemented as separate software programs, procedures or modules, and thus various subsets of these modules are, optionally, combined or otherwise re-arranged in various embodiments. In some embodiments, memory **102** optionally stores a subset of the modules and data structures identified above. Furthermore, memory **102** optionally stores additional modules and data structures not described above.

In some embodiments, device **100** is a device where operation of a predefined set of functions on the device is performed exclusively through a touch screen and/or a touchpad. By using a touch screen and/or a touchpad as the primary input control device for operation of device **100**, the number of physical input control devices (such as push buttons, dials, and the like) on device **100** is, optionally, reduced.

The predefined set of functions that are performed exclusively through a touch screen and/or a touchpad optionally include navigation between user interfaces. In some embodiments, the touchpad, when touched by the user, navigates device **100** to a main, home, or root menu from any user interface that is displayed on device **100**. In such embodiments, a "menu button" is implemented using a touchpad. In some other embodiments, the menu button is a physical push button or other physical input control device instead of a touchpad.

FIG. **1**B is a block diagram illustrating exemplary components for event handling in accordance with some embodiments. In some embodiments, memory **102** (in FIG. **1**A) includes event sorter **170** (e.g., in operating system **126**) and a respective application **136-1** (e.g., any of the aforementioned applications **137-153**).

Event sorter **170** receives event information and determines the application **136-1** and application view **191** of application **136-1** to which to deliver the event information. Event sorter **170** includes event monitor **171** and event dispatcher module **174**. In some embodiments, application **136-1** includes application internal state **192**, which indicates the current application view(s) displayed on touch sensitive display **112** when the application is active or executing. In some embodiments, device/global internal state stored in the memory **102** is used by event sorter **170** to determine which application(s) is (are) currently active, and application internal state **192** is used by event sorter **170** to determine application views **191** to which to deliver event information.

In some embodiments, application internal state **192** includes additional information, such as one or more of: resume information to be used when application **136-1** resumes execution, user interface state information that indicates information being displayed or that is ready for display by application **136-1**, a state queue for enabling the user to go back to a prior state or view of application **136-1**, and a redo/undo queue of previous actions taken by the user.

Event monitor **171** receives event information from peripherals interface **118**. Event information includes information about a sub-event (e.g., a user touch on touch-sensitive display **112**, as part of a multi-touch gesture). Peripherals interface **118** transmits information it receives from I/O subsystem **106** or a sensor, such as proximity sensor **166**, accelerometer(s) **168**, and/or microphone **113** (through audio circuitry **110**). Information that peripherals interface **118** receives from I/O subsystem **106** includes information from touch-sensitive display **112** or a touch-sensitive surface.

In some embodiments, event monitor **171** sends requests to the peripherals interface **118** at predetermined intervals. In response, peripherals interface **118** transmits event information. In other embodiments, peripheral interface **118** transmits event information only when there is a significant event (e.g., receiving an input above a predetermined noise threshold and/or for more than a predetermined duration).

In some embodiments, event sorter **170** also includes a hit view determination module **172** and/or an active event recognizer determination module **173**.

Hit view determination module **172** provides software procedures for determining where a sub-event has taken place within one or more views, when touch sensitive display **112** displays more than one view. Views are made up of controls and other elements that a user can see on the display.

Another aspect of the user interface associated with an application is a set of views, sometimes herein called application views or user interface windows, in which information is displayed and touch-based gestures occur. The application views (of a respective application) in which a touch is detected may correspond to programmatic levels within a programmatic or view hierarchy of the application. For example, the lowest level view in which a touch is detected may be called the hit view, and the set of events that are recognized as proper inputs may be determined based, at least in part, on the hit view of the initial touch that begins a touch-based gesture.

Hit view determination module **172** receives information related to sub-events of a touch-based gesture. When an application has multiple views organized in a hierarchy, hit view determination module **172** identifies a hit view as the lowest view in the hierarchy which should handle the sub-event. In most circumstances, the hit view is the lowest level view in which an initiating sub-event occurs (e.g., the first sub-event in the sequence of sub-events that form an event or potential event). Once the hit view is identified by the hit view determination module, the hit view typically receives all sub-events related to the same touch or input source for which it was identified as the hit view.

Active event recognizer determination module **173** determines which view or views within a view hierarchy should receive a particular sequence of sub-events. In some embodiments, active event recognizer determination module **173** determines that only the hit view should receive a particular sequence of sub-events. In other embodiments, active event recognizer determination module **173** determines that all views that include the physical location of a sub-event are actively involved views, and therefore determines that all actively involved views should receive a particular sequence of sub-events. In other embodiments, even if touch sub-events were entirely confined to the area associated with one particular view, views higher in the hierarchy would still remain as actively involved views.

Event dispatcher module **174** dispatches the event information to an event recognizer (e.g., event recognizer **180**). In embodiments including active event recognizer determination module **173**, event dispatcher module **174** delivers the event information to an event recognizer determined by active event recognizer determination module **173**. In some embodiments, event dispatcher module **174** stores in an event queue the event information, which is retrieved by a respective event receiver module **182**.

In some embodiments, operating system **126** includes event sorter **170**. Alternatively, application **136-1** includes event sorter **170**. In yet other embodiments, event sorter **170** is a stand-alone module, or a part of another module stored in memory **102**, such as contact/motion module **130**.

In some embodiments, application **136-1** includes a plurality of event handlers **190** and one or more application views **191**, each of which includes instructions for handling touch events that occur within a respective view of the application's user interface. Each application view **191** of the application **136-1** includes one or more event recognizers **180**. Typically, a respective application view **191** includes a plurality of event recognizers **180**. In other embodiments, one or more of event recognizers **180** are part of a separate module, such as a user interface kit (not shown) or a higher level object from which application **136-1** inherits methods and other properties. In some embodiments, a respective event handler **190** includes one or more of: data updater **176**, object updater **177**, GUI updater **178**, and/or event data **179** received from event sorter **170**. Event handler **190** may utilize or call data updater **176**, object updater **177** or GUI updater **178** to update the application internal state **192**. Alternatively, one or more of the application views **191** includes one or more respective event handlers **190**. Also, in some embodiments, one or more of data updater **176**, object updater **177**, and GUI updater **178** are included in a respective application view **191**.

A respective event recognizer **180** receives event information (e.g., event data **179**) from event sorter **170**, and identifies an event from the event information. Event recognizer **180** includes event receiver **182** and event comparator **184**. In some embodiments, event recognizer **180** also

includes at least a subset of: metadata **183**, and event delivery instructions **188** (which may include sub-event delivery instructions).

Event receiver **182** receives event information from event sorter **170**. The event information includes information about a sub-event, for example, a touch or a touch movement. Depending on the sub-event, the event information also includes additional information, such as location of the sub-event. When the sub-event concerns motion of a touch the event information may also include speed and direction of the sub-event. In some embodiments, events include rotation of the device from one orientation to another (e.g., from a portrait orientation to a landscape orientation, or vice versa), and the event information includes corresponding information about the current orientation (also called device attitude) of the device.

Event comparator **184** compares the event information to predefined event or sub-event definitions and, based on the comparison, determines an event or sub-event, or determines or updates the state of an event or sub-event. In some embodiments, event comparator **184** includes event definitions **186**. Event definitions **186** contain definitions of events (e.g., predefined sequences of sub-events), for example, event **1** (**187-1**), event **2** (**187-2**), and others. In some embodiments, sub-events in an event **187** include, for example, touch begin, touch end, touch movement, touch cancellation, and multiple touching. In one example, the definition for event **1** (**187-1**) is a double-tap on a displayed object. The double-tap, for example, comprises a first touch (touch begin) on the displayed object for a predetermined phase, a first lift-off (touch end) for a predetermined phase, a second touch (touch begin) on the displayed object for a predetermined phase, and a second lift-off (touch end) for a predetermined phase. In another example, the definition for event **2** (**187-2**) is a dragging on a displayed object. The dragging, for example, comprises a touch (or contact) on the displayed object for a predetermined phase, a movement of the touch across touch-sensitive display **112**, and lift-off of the touch (touch end). In some embodiments, the event also includes information for one or more associated event handlers **190**.

In some embodiments, event definition **187** includes a definition of an event for a respective user-interface object. In some embodiments, event comparator **184** performs a hit test to determine which user-interface object is associated with a sub-event. For example, in an application view in which three user-interface objects are displayed on touch-sensitive display **112**, when a touch is detected on touch-sensitive display **112**, event comparator **184** performs a hit test to determine which of the three user-interface objects is associated with the touch (sub-event). If each displayed object is associated with a respective event handler **190**, the event comparator uses the result of the hit test to determine which event handler **190** should be activated. For example, event comparator **184** selects an event handler associated with the sub-event and the object triggering the hit test.

In some embodiments, the definition for a respective event **187** also includes delayed actions that delay delivery of the event information until after it has been determined whether the sequence of sub-events does or does not correspond to the event recognizer's event type.

When a respective event recognizer **180** determines that the series of sub-events do not match any of the events in event definitions **186**, the respective event recognizer **180** enters an event impossible, event failed, or event ended state, after which it disregards subsequent sub-events of the touch-based gesture. In this situation, other event recognizers, if any, that remain active for the hit view continue to track and process sub-events of an ongoing touch-based gesture.

In some embodiments, a respective event recognizer **180** includes metadata **183** with configurable properties, flags, and/or lists that indicate how the event delivery system should perform sub-event delivery to actively involved event recognizers. In some embodiments, metadata **183** includes configurable properties, flags, and/or lists that indicate how event recognizers may interact with one another. In some embodiments, metadata **183** includes configurable properties, flags, and/or lists that indicate whether sub-events are delivered to varying levels in the view or programmatic hierarchy.

In some embodiments, a respective event recognizer **180** activates event handler **190** associated with an event when one or more particular sub-events of an event are recognized. In some embodiments, a respective event recognizer **180** delivers event information associated with the event to event handler **190**. Activating an event handler **190** is distinct from sending (and deferred sending) sub-events to a respective hit view. In some embodiments, event recognizer **180** throws a flag associated with the recognized event, and event handler **190** associated with the flag catches the flag and performs a predefined process.

In some embodiments, event delivery instructions **188** include sub-event delivery instructions that deliver event information about a sub-event without activating an event handler. Instead, the sub-event delivery instructions deliver event information to event handlers associated with the series of sub-events or to actively involved views. Event handlers associated with the series of sub-events or with actively involved views receive the event information and perform a predetermined process.

In some embodiments, data updater **176** creates and updates data used in application **136-1**. For example, data updater **176** updates the telephone number used in contacts module **137**, or stores a video file used in video and music player module **145**. In some embodiments, object updater **177** creates and updates objects used in application **136-1**. For example, object updater **177** creates a new user-interface object or updates the position of a user-interface object. GUI updater **178** updates the GUI. For example, GUI updater **178** prepares display information and sends it to graphics module **132** for display on a touch-sensitive display.

In some embodiments, event handler(s) **190** includes or has access to data updater **176**, object updater **177**, and GUI updater **178**. In some embodiments, data updater **176**, object updater **177**, and GUI updater **178** are included in a single module of a respective application **136-1** or application view **191**. In other embodiments, they are included in two or more software modules.

It shall be understood that the foregoing discussion regarding event handling of user touches on touch-sensitive displays also applies to other forms of user inputs to operate multifunction devices **100** with input-devices, not all of which are initiated on touch screens, e.g., coordinating mouse movement and mouse button presses with or without single or multiple keyboard presses or holds, user movements taps, drags, scrolls, etc., on touch-pads, pen stylus inputs, movement of the device, oral instructions, detected eye movements, biometric inputs, and/or any combination thereof, which may be utilized as inputs corresponding to sub-events which define an event to be recognized.

FIG. **2**A illustrates a portable multifunction device **100** having a touch screen (e.g., touch-sensitive display system **112**, FIG. **1**A) in accordance with some embodiments. The

touch screen optionally displays one or more graphics within user interface (UI) **200**. In this embodiment, as well as others described below, a user is enabled to select one or more of the graphics by making a gesture on the graphics, for example, with one or more fingers **202** (not drawn to scale in the figure) or one or more styluses **203** (not drawn to scale in the figure). In some embodiments, selection of one or more graphics occurs when the user breaks contact with the one or more graphics. In some embodiments, the gesture optionally includes one or more taps, one or more swipes (from left to right, right to left, upward and/or downward) and/or a rolling of a finger (from right to left, left to right, upward and/or downward) that has made contact with device **100**. In some implementations or circumstances, inadvertent contact with a graphic does not select the graphic. For example, a swipe gesture that sweeps over an application icon optionally does not select the corresponding application when the gesture corresponding to selection is a tap.

Device **100** optionally also includes one or more physical buttons, such as "home" or menu button **204**. As described previously, menu button **204** is, optionally, used to navigate to any application **136** in a set of applications that are, optionally executed on device **100**. Alternatively, in some embodiments, the menu button is implemented as a soft key in a GUI displayed on the touch-screen display.

In some embodiments, device **100** includes the touch-screen display, menu button **204**, push button **206** for powering the device on/off and locking the device, volume adjustment button(s) **208**, Subscriber Identity Module (SIM) card slot **210**, head set jack **212**, and docking/charging external port **124**. Push button **206** is, optionally, used to turn the power on/off on the device by depressing the button and holding the button in the depressed state for a predefined time interval; to lock the device by depressing the button and releasing the button before the predefined time interval has elapsed; and/or to unlock the device or initiate an unlock process. In some embodiments, device **100** also accepts verbal input for activation or deactivation of some functions through microphone **113**. Device **100** also, optionally, includes one or more contact intensity sensors **165** for detecting intensity of contacts on touch-sensitive display system **112** and/or one or more tactile output generators **167** for generating tactile outputs for a user of device **100**.

FIG. **2**B illustrates an exemplary user interface on a device (e.g., device **100**, FIG. **1**A) with a touch-sensitive surface **251** (e.g., a tablet or touchpad) that is separate from the display **250**. Device **100** also, optionally, includes one or more contact intensity sensors (e.g., one or more of sensors **259**) for detecting intensity of contacts on touch-sensitive surface **251** and/or one or more tactile output generators **257** for generating tactile outputs for a user of device **100**.

Although many of the examples that follow will be given with reference to inputs on touch screen display **112** (where the touch sensitive surface and the display are combined), in some embodiments, the device detects inputs on a touch-sensitive surface that is separate from the display, as shown in FIG. **2**B. In some embodiments, the touch-sensitive surface (e.g., **251** in FIG. **2**B) has a primary axis (e.g., **252** in FIG. **2**B) that corresponds to a primary axis (e.g., **253** in FIG. **2**B) on the display (e.g., **250**). In accordance with these embodiments, the device detects contacts (e.g., **260** and **262** in FIG. **2**B) with the touch-sensitive surface **251** at locations that correspond to respective locations on the display (e.g., in FIG. **2**B, **260** corresponds to **268** and **262** corresponds to **270**). In this way, user inputs (e.g., contacts **260** and **262**, and movements thereof) detected by the device on the touch-sensitive surface (e.g., **251** in FIG. **2**B) are used by the device to manipulate the user interface on the display (e.g., **250** in FIG. **2**B) of the multifunction device when the touch-sensitive surface is separate from the display. It should be understood that similar methods are, optionally, used for other user interfaces described herein.

Additionally, while the following examples are given primarily with reference to finger inputs (e.g., finger contacts, finger tap gestures, finger swipe gestures, etc.), it should be understood that, in some embodiments, one or more of the finger inputs are replaced with input from another input device (e.g., a mouse based input or a stylus input). For example, a swipe gesture is, optionally, replaced with a mouse click (e.g., instead of a contact) followed by movement of the cursor along the path of the swipe (e.g., instead of movement of the contact). As another example, a tap gesture is, optionally, replaced with a mouse click while the cursor is located over the location of the tap gesture (e.g., instead of detection of the contact followed by ceasing to detect the contact). Similarly, when multiple user inputs are simultaneously detected, it should be understood that multiple computer mice are, optionally, used simultaneously, or a mouse and finger contacts are, optionally, used simultaneously.

As used herein, the term "focus selector" refers to an input element that indicates a current part of a user interface with which a user is interacting. In some implementations that include a cursor or other location marker, the cursor acts as a "focus selector," so that when an input (e.g., a press input) is detected on a touch-sensitive surface (e.g., touchpad or touch-sensitive surface **251** in FIG. **2**B) while the cursor is over a particular user interface element (e.g., a button, window, slider or other user interface element), the particular user interface element is adjusted in accordance with the detected input. In some implementations that include a touch-screen display (e.g., touch-sensitive display system **112** in FIG. **1**A or the touch screen in FIG. **2**A) that enables direct interaction with user interface elements on the touch-screen display, a detected contact on the touch-screen acts as a "focus selector," so that when an input (e.g., a press input by the contact) is detected on the touch-screen display at a location of a particular user interface element (e.g., a button, window, slider or other user interface element), the particular user interface element is adjusted in accordance with the detected input. In some implementations, focus is moved from one region of a user interface to another region of the user interface without corresponding movement of a cursor or movement of a contact on a touch-screen display (e.g., by using a tab key or arrow keys to move focus from one button to another button); in these implementations, the focus selector moves in accordance with movement of focus between different regions of the user interface. Without regard to the specific form taken by the focus selector, the focus selector is generally the user interface element (or contact on a touch-screen display) that is controlled by the user so as to communicate the user's intended interaction with the user interface (e.g., by indicating, to the device, the element of the user interface with which the user is intending to interact). For example, the location of a focus selector (e.g., a cursor, a contact, or a selection box) over a respective button while a press input is detected on the touch-sensitive surface (e.g., a touchpad or touch screen) will indicate that the user is intending to activate the respective button (as opposed to other user interface elements shown on a display of the device).

As used in the specification and claims, the term "intensity" of a contact on a touch-sensitive surface refers to the force or pressure (force per unit area) of a contact (e.g., a

finger contact or a stylus contact) on the touch-sensitive surface, or to a substitute (proxy) for the force or pressure of a contact on the touch-sensitive surface. The intensity of a contact has a range of values that includes at least four distinct values and more typically includes hundreds of distinct values (e.g., at least 256). Intensity of a contact is, optionally, determined (or measured) using various approaches and various sensors or combinations of sensors. For example, one or more force sensors underneath or adjacent to the touch-sensitive surface are, optionally, used to measure force at various points on the touch-sensitive surface. In some implementations, force measurements from multiple force sensors are combined (e.g., a weighted average or a sum) to determine an estimated force of a contact. Similarly, a pressure-sensitive tip of a stylus is, optionally, used to determine a pressure of the stylus on the touch-sensitive surface. Alternatively, the size of the contact area detected on the touch-sensitive surface and/or changes thereto, the capacitance of the touch-sensitive surface proximate to the contact and/or changes thereto, and/or the resistance of the touch-sensitive surface proximate to the contact and/or changes thereto are, optionally, used as a substitute for the force or pressure of the contact on the touch-sensitive surface. In some implementations, the substitute measurements for contact force or pressure are used directly to determine whether an intensity threshold has been exceeded (e.g., the intensity threshold is described in units corresponding to the substitute measurements). In some implementations, the substitute measurements for contact force or pressure are converted to an estimated force or pressure and the estimated force or pressure is used to determine whether an intensity threshold has been exceeded (e.g., the intensity threshold is a pressure threshold measured in units of pressure). Using the intensity of a contact as an attribute of a user input allows for user access to additional device functionality that may otherwise not be readily accessible by the user on a reduced-size device with limited real estate for displaying affordances (e.g., on a touch-sensitive display) and/or receiving user input (e.g., via a touch-sensitive display, a touch-sensitive surface, or a physical/mechanical control such as a knob or a button).

In some embodiments, contact/motion module **130** uses a set of one or more intensity thresholds to determine whether an operation has been performed by a user (e.g., to determine whether a user has "clicked" on an icon). In some embodiments, at least a subset of the intensity thresholds are determined in accordance with software parameters (e.g., the intensity thresholds are not determined by the activation thresholds of particular physical actuators and can be adjusted without changing the physical hardware of device **100**). For example, a mouse "click" threshold of a trackpad or touch-screen display can be set to any of a large range of predefined thresholds values without changing the trackpad or touch-screen display hardware. Additionally, in some implementations a user of the device is provided with software settings for adjusting one or more of the set of intensity thresholds (e.g., by adjusting individual intensity thresholds and/or by adjusting a plurality of intensity thresholds at once with a system-level click "intensity" parameter).

As used in the specification and claims, the term "characteristic intensity" of a contact refers to a characteristic of the contact based on one or more intensities of the contact. In some embodiments, the characteristic intensity is based on multiple intensity samples. The characteristic intensity is, optionally, based on a predefined number of intensity samples, or a set of intensity samples collected during a predetermined time period (e.g., 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10 seconds) relative to a predefined event (e.g., after detecting the contact, prior to detecting liftoff of the contact, before or after detecting a start of movement of the contact, prior to detecting an end of the contact, before or after detecting an increase in intensity of the contact, and/or before or after detecting a decrease in intensity of the contact). A characteristic intensity of a contact is, optionally based on one or more of: a maximum value of the intensities of the contact, a mean value of the intensities of the contact, an average value of the intensities of the contact, a top 10 percentile value of the intensities of the contact, a value at the half maximum of the intensities of the contact, a value at the 90 percent maximum of the intensities of the contact, or the like. In some embodiments, the duration of the contact is used in determining the characteristic intensity (e.g., when the characteristic intensity is an average of the intensity of the contact over time). In some embodiments, the characteristic intensity is compared to a set of one or more intensity thresholds to determine whether an operation has been performed by a user. For example, the set of one or more intensity thresholds may include a first intensity threshold and a second intensity threshold. In this example, a contact with a characteristic intensity that does not exceed the first threshold results in a first operation, a contact with a characteristic intensity that exceeds the first intensity threshold and does not exceed the second intensity threshold results in a second operation, and a contact with a characteristic intensity that exceeds the second intensity threshold results in a third operation. In some embodiments, a comparison between the characteristic intensity and one or more intensity thresholds is used to determine whether or not to perform one or more operations (e.g., whether to perform a respective option or forgo performing the respective operation) rather than being used to determine whether to perform a first operation or a second operation.

In some embodiments, a portion of a gesture is identified for purposes of determining a characteristic intensity. For example, a touch-sensitive surface may receive a continuous swipe contact transitioning from a start location and reaching an end location (e.g., a drag gesture), at which point the intensity of the contact increases. In this example, the characteristic intensity of the contact at the end location may be based on only a portion of the continuous swipe contact, and not the entire swipe contact (e.g., only the portion of the swipe contact at the end location). In some embodiments, a smoothing algorithm may be applied to the intensities of the swipe contact prior to determining the characteristic intensity of the contact. For example, the smoothing algorithm optionally includes one or more of: an unweighted sliding-average smoothing algorithm, a triangular smoothing algorithm, a median filter smoothing algorithm, and/or an exponential smoothing algorithm. In some circumstances, these smoothing algorithms eliminate narrow spikes or dips in the intensities of the swipe contact for purposes of determining a characteristic intensity.

The user interface figures described herein optionally include various intensity diagrams that show the current intensity of the contact on the touch-sensitive surface relative to one or more intensity thresholds (e.g., a contact detection intensity threshold IT_0, a light press intensity threshold IT_L, a deep press intensity threshold IT_D (e.g., that is at least initially higher than I_L), and/or one or more other intensity thresholds (e.g., an intensity threshold hi that is lower than I_L)). This intensity diagram is typically not part of the displayed user interface, but is provided to aid in the interpretation of the figures. In some embodiments, the light press intensity threshold corresponds to an intensity at which

the device will perform operations typically associated with clicking a button of a physical mouse or a trackpad. In some embodiments, the deep press intensity threshold corresponds to an intensity at which the device will perform operations that are different from operations typically associated with clicking a button of a physical mouse or a trackpad. In some embodiments, when a contact is detected with a characteristic intensity below the light press intensity threshold (e.g., and above a nominal contact-detection intensity threshold IT_0 below which the contact is no longer detected), the device will move a focus selector in accordance with movement of the contact on the touch-sensitive surface without performing an operation associated with the light press intensity threshold or the deep press intensity threshold. Generally, unless otherwise stated, these intensity thresholds are consistent between different sets of user interface figures.

In some embodiments, the response of the device to inputs detected by the device depends on criteria based on the contact intensity during the input. For example, for some "light press" inputs, the intensity of a contact exceeding a first intensity threshold during the input triggers a first response. In some embodiments, the response of the device to inputs detected by the device depends on criteria that include both the contact intensity during the input and time-based criteria. For example, for some "deep press" inputs, the intensity of a contact exceeding a second intensity threshold during the input, greater than the first intensity threshold for a light press, triggers a second response only if a delay time has elapsed between meeting the first intensity threshold and meeting the second intensity threshold. This delay time is typically less than 200 ms in duration (e.g., 40, 100, or 120 ms, depending on the magnitude of the second intensity threshold, with the delay time increasing as the second intensity threshold increases). This delay time helps to avoid accidental deep press inputs. As another example, for some "deep press" inputs, there is a reduced-sensitivity time period that occurs after the time at which the first intensity threshold is met. During the reduced-sensitivity time period, the second intensity threshold is increased. This temporary increase in the second intensity threshold also helps to avoid accidental deep press inputs. For other deep press inputs, the response to detection of a deep press input does not depend on time-based criteria.

In some embodiments, one or more of the input intensity thresholds and/or the corresponding outputs vary based on one or more factors, such as user settings, contact motion, input timing, application running, rate at which the intensity is applied, number of concurrent inputs, user history, environmental factors (e.g., ambient noise), focus selector position, and the like. Exemplary factors are described in U.S. patent application Ser. Nos. 14/399,606 and 14/624,296, which are incorporated by reference herein in their entireties.

For example, FIG. **2**C illustrates a dynamic intensity threshold **280** that changes over time based in part on the intensity of touch input **276** over time. Dynamic intensity threshold **280** is a sum of two components, first component **274** that decays over time after a predefined delay time p**1** from when touch input **276** is initially detected, and second component **278** that trails the intensity of touch input **276** over time. The initial high intensity threshold of first component **274** reduces accidental triggering of a "deep press" response, while still allowing an immediate "deep press" response if touch input **276** provides sufficient intensity. Second component **278** reduces unintentional triggering of a "deep press" response by gradual intensity fluctuations of in a touch input. In some embodiments, when touch input **276** satisfies dynamic intensity threshold **280** (e.g., at point **281** in FIG. **2**C), the "deep press" response is triggered.

FIG. **2**D illustrates another dynamic intensity threshold **286** (e.g., intensity threshold ID). FIG. **2**D also illustrates two other intensity thresholds: a first intensity threshold hi and a second intensity threshold I_L. In FIG. **2**D, although touch input **284** satisfies the first intensity threshold hi and the second intensity threshold I_L prior to time p**2**, no response is provided until delay time p**2** has elapsed at time **282**. Also in FIG. **2**D, dynamic intensity threshold **286** decays over time, with the decay starting at time **288** after a predefined delay time p**1** has elapsed from time **282** (when the response associated with the second intensity threshold I_L was triggered). This type of dynamic intensity threshold reduces accidental triggering of a response associated with the dynamic intensity threshold ID immediately after, or concurrently with, triggering a response associated with a lower intensity threshold, such as the first intensity threshold hi or the second intensity threshold I_L.

FIG. **2**E illustrate yet another dynamic intensity threshold **292** (e.g., intensity threshold ID). In FIG. **2**E, a response associated with the intensity threshold I_L is triggered after the delay time p**2** has elapsed from when touch input **290** is initially detected. Concurrently, dynamic intensity threshold **292** decays after the predefined delay time p**1** has elapsed from when touch input **290** is initially detected. So a decrease in intensity of touch input **290** after triggering the response associated with the intensity threshold I_L, followed by an increase in the intensity of touch input **290**, without releasing touch input **290**, can trigger a response associated with the intensity threshold ID (e.g., at time **294**) even when the intensity of touch input **290** is below another intensity threshold, for example, the intensity threshold I_L.

An increase of characteristic intensity of the contact from an intensity below the light press intensity threshold IT_L to an intensity between the light press intensity threshold IT_L and the deep press intensity threshold IT_D is sometimes referred to as a "light press" input. An increase of characteristic intensity of the contact from an intensity below the deep press intensity threshold IT_D to an intensity above the deep press intensity threshold IT_D is sometimes referred to as a "deep press" input. An increase of characteristic intensity of the contact from an intensity below the contact-detection intensity threshold IT_0 to an intensity between the contact-detection intensity threshold IT_0 and the light press intensity threshold IT_L is sometimes referred to as detecting the contact on the touch-surface. A decrease of characteristic intensity of the contact from an intensity above the contact-detection intensity threshold IT_0 to an intensity below the contact-detection intensity threshold IT_0 is sometimes referred to as detecting liftoff of the contact from the touch-surface. In some embodiments IT_0 is zero. In some embodiments, IT_0 is greater than zero. In some illustrations a shaded circle or oval is used to represent intensity of a contact on the touch-sensitive surface. In some illustrations, a circle or oval without shading is used represent a respective contact on the touch-sensitive surface without specifying the intensity of the respective contact.

In some embodiments, described herein, one or more operations are performed in response to detecting a gesture that includes a respective press input or in response to detecting the respective press input performed with a respective contact (or a plurality of contacts), where the respective press input is detected based at least in part on detecting an increase in intensity of the contact (or plurality of contacts) above a press-input intensity threshold. In some embodiments, the respective operation is performed in response to

detecting the increase in intensity of the respective contact above the press-input intensity threshold (e.g., the respective operation is performed on a "down stroke" of the respective press input). In some embodiments, the press input includes an increase in intensity of the respective contact above the press-input intensity threshold and a subsequent decrease in intensity of the contact below the press-input intensity threshold, and the respective operation is performed in response to detecting the subsequent decrease in intensity of the respective contact below the press-input threshold (e.g., the respective operation is performed on an "up stroke" of the respective press input).

In some embodiments, the device employs intensity hysteresis to avoid accidental inputs sometimes termed "jitter," where the device defines or selects a hysteresis intensity threshold with a predefined relationship to the press-input intensity threshold (e.g., the hysteresis intensity threshold is X intensity units lower than the press-input intensity threshold or the hysteresis intensity threshold is 75%, 90%, or some reasonable proportion of the press-input intensity threshold). Thus, in some embodiments, the press input includes an increase in intensity of the respective contact above the press-input intensity threshold and a subsequent decrease in intensity of the contact below the hysteresis intensity threshold that corresponds to the press-input intensity threshold, and the respective operation is performed in response to detecting the subsequent decrease in intensity of the respective contact below the hysteresis intensity threshold (e.g., the respective operation is performed on an "up stroke" of the respective press input). Similarly, in some embodiments, the press input is detected only when the device detects an increase in intensity of the contact from an intensity at or below the hysteresis intensity threshold to an intensity at or above the press-input intensity threshold and, optionally, a subsequent decrease in intensity of the contact to an intensity at or below the hysteresis intensity, and the respective operation is performed in response to detecting the press input (e.g., the increase in intensity of the contact or the decrease in intensity of the contact, depending on the circumstances).

For ease of explanation, the description of operations performed in response to a press input associated with a press-input intensity threshold or in response to a gesture including the press input are, optionally, triggered in response to detecting: an increase in intensity of a contact above the press-input intensity threshold, an increase in intensity of a contact from an intensity below the hysteresis intensity threshold to an intensity above the press-input intensity threshold, a decrease in intensity of the contact below the press-input intensity threshold, or a decrease in intensity of the contact below the hysteresis intensity threshold corresponding to the press-input intensity threshold. Additionally, in examples where an operation is described as being performed in response to detecting a decrease in intensity of a contact below the press-input intensity threshold, the operation is, optionally, performed in response to detecting a decrease in intensity of the contact below a hysteresis intensity threshold corresponding to, and lower than, the press-input intensity threshold. As described above, in some embodiments, the triggering of these responses also depends on time-based criteria being met (e.g., a delay time has elapsed between a first intensity threshold being met and a second intensity threshold being met).

FIG. **3** is a schematic of a user interface for a menu of applications on portable multifunction device **100**, in accordance with some embodiments. Similar user interfaces may be implemented on a desktop device **300** in accordance with some embodiments. In some embodiments, user interface **300** includes the following elements, or a subset or superset thereof:

- Signal strength indicator(s) **302** for wireless communication(s), such as cellular and Wi-Fi signals;
- Time **304**;
- Bluetooth indicator **305**;
- Battery status indicator **306**;
- Tray **308** with icons for frequently used applications, such as:
  - Phone **138**, which may include an indicator **314** of the number of missed calls or voicemail messages;
  - E-mail client **140**, which may include an indicator **310** of the number of unread e-mails;
  - Browser **147**; and
  - Video and music player **145**, also referred to as iPod (trademark of Apple Inc.) module **152**; and
- Icons for other applications, such as:
  - IM **141**;
  - Calendar **148**;
  - Image management **144**;
  - Camera **143**;
  - Online video module **145**, also referred to as YouTube (trademark of Google Inc.) module **145**;
  - Stocks **149-2**;
  - Map **146**;
  - Weather **149-1**;
  - Dictionary **149-3**;
  - User-Created Widget **149-6**;
  - Notes **146**;
  - Settings **312**, which provides access to settings for device **100** and its various applications **136**;
  - Word processor **153-1**;
  - Drawing **153-2**;
  - Spreadsheet **153-3**; and
  - Presentation **153-4**.

User Interfaces and Associated Processes

Attention is now directed towards embodiments of processes and associated user interfaces ("UI") that may be implemented on an electronic device with a display, a touch-sensitive surface, and optionally one or more sensors to detect intensities of contacts with the touch-sensitive surface, such as the portable multifunction device **100**.

FIG. **4A** is a flow chart illustrating a method **400** of cursor manipulation, in accordance with some embodiments. The method **400** is performed at a portable multifunction device (e.g., the device **100** in FIG. **1A**) with a touch screen display (e.g., the touch screen display **112** in FIG. **1A**). As described below, the method **400** provides an expedient mechanism for selecting content at a portable multifunction device with a touch screen display. This method is both faster and easier to perform than using a peripheral device, like a mouse. The method is also intuitive to a user, thereby reducing the number, extent, and/or nature of the inputs from the user when selecting content, and creating a more efficient human-machine interface. A more efficient input mechanism also requires less computing resources, thereby increasing battery life of the device.

In some embodiments, the device **100** displays content of an electronic document on the touch screen display **112**. In some embodiments, the content comprises text (e.g., plain text, unstructured text, formatted text, or text in a web page). In other embodiments, the content comprises graphics with or without text. Moreover, the content may be editable or read-only. In addition to displaying the content, when no

content is selected, the device **100** may display a cursor within the electronic document, e.g., for text entry. In some embodiments, while displaying the content of the electronic document, the device **100** detects two substantially simultaneous touch inputs at **402**. These two substantially simultaneous touch inputs can occur and be detected anywhere on the screen, including over an active virtual keyboard being displayed on the screen.

In some embodiments, the device **100** continuously monitors touch inputs and continuous movements of the touch inputs on the touch screen **112**. Once touch inputs are detected by the device **100**, the device **100** determines whether the two substantially simultaneous touch inputs are located on a soft keyboard on the touch screen at **406**. In response to detecting the two substantially simultaneous touch inputs that started on the soft keyboard (**406**—Yes), the device **100** displays a soft keyboard that has a changed appearance at **404**. In some embodiments, the device continuously monitors the touch inputs at step **406** so that the appearance of the keyboard remains changed when the two substantially simultaneous touch inputs that started on the soft keyboard are followed by a continuous movement of the two substantially simultaneous touch inputs without breaking contact with the touch screen **112**. In other words, the device at step **406** detects whether there were two substantially simultaneous inputs on the soft keyboard either with or without a subsequent continuous movement off the keyboard. In some embodiments, in response to detecting the two substantially simultaneous touch inputs where not initially detected on the soft keyboard (**406**—No), the device **100** displays a soft keyboard with an unchanged appearance at **408**, e.g., displays a regular unblurred soft keyboard or a keyboard with all alphanumeric characters displayed. A soft keyboard is a set of multiple virtual keys displayed on the screen, e.g., a QWERTY keyboard, as shown in FIG. **13**A.

In FIG. **13**A, the exemplary soft keyboard **1321** has multiple virtual keys and each key has a respective alphanumeric character. In addition, in some embodiments, each key has simulated three-dimensional characteristics (e.g., a three-dimensional shape, drop shadow, etc.) In some embodiments, in response to detecting two substantially simultaneous touch inputs at a first location on the soft keyboard, the device **100** displays a soft keyboard with a changed appearance as shown in FIG. **13**B. In comparison with the soft keyboard with the unchanged appearance shown in FIG. **13**A, the soft keyboard **1321** with the changed appearance shown in FIG. **13**B does not have the simulated three-dimensional characteristics (e.g., the drop shadow is removed) and the alphanumeric characters on the keys are removed. In addition, in some embodiments, the color, hue, saturation, brightness, and/or contrast of the soft keyboard **1321** is also changed (e.g., semitransparent) to indicate that the application has entered a mode that is different from a text entering mode. In the non-text entering mode, the soft keyboard is not responsive to keystrokes for text entries, but rather serves as an onscreen touchpad or track pad for moving the cursor or for selecting content. The changed keyboard appearance provides an intuitive indication that the function of the soft keyboard has changed.

As shown in FIG. **13**B, in some embodiments, the device **100** detects a sliding gesture **1332** starting from the first location on the soft keyboard **1321** to a second location anywhere on the touch screen **112**. The sliding gesture **1332** follows the two substantially simultaneous touch inputs without breaking contact with the touch screen **112**, e.g., it starts on the soft keyboard and moves beyond the soft keyboard **1321** into the content region **1302**. In response to detecting the sliding gesture, the device **100** maintains the changed appearance of the soft keyboard **1320** throughout the entire sliding gesture. At the end of the sliding gesture, as shown in FIG. **13**C, in response to a lift-off gesture, the device **100** displays the soft keyboard with its original unchanged appearance, e.g., with the alphanumeric characters on the virtual keys and the three-dimensional characteristics of the virtual keys and/or an unblurred the virtual keyboard.

FIGS. **7**A-**7**C illustrate exemplary user interfaces of soft keyboard appearance changes, in accordance with some embodiments. In FIG. **7**A, content of an electronic document is displayed on the touch screen display **112**. Also displayed on the touch screen display **112** is a soft keyboard **521** that is displayed in focus. Subsequently, the device **100** detects two substantially simultaneous touch inputs (e.g., two-finger tap) **524** on the soft keyboard **521**. In response to detecting the two substantially simultaneous touch inputs on the soft keyboard **521**, the device **100** displays a blurred soft keyboard **521**, as shown in FIG. **7**B.

In some embodiments, instead of displaying the blurred soft keyboard, the device changes one or more of: color, hue, saturation, brightness, and contrast of the soft keyboard **521** based on the content of the electronic document. In some embodiments, the appearance of the blurred keyboard **521** is based on the content displayed and a set of control-appearance values for blur radius, saturation adjustment, opacity of a white overlay, opacity of a black overlay, opacity of user interface elements in keyboard **521**, and/or the color of text displayed in the region where the keyboard **521** is displayed. For example, in FIG. **7**B, the region where keyboard **521** is located has been blurred in accordance with a value for the blur radius, the black text color of the content **500**, etc.

As shown in FIG. **7**B, once the device **100** detects a continuous movement without breaking contact with the touch screen display following the two substantially simultaneous touch input from location **524-1** on the keyboard **521**, leaving the keyboard **521**, and moving to location **524-2** on the content **500** and not over the keyboard. In response, the device **100** replaces the display of the blurred soft keyboard with display of focused soft keyboard **521**, as shown in FIG. **7**C. Subsequently, as shown in FIG. **7**C, as long as the touch inputs **524** are not located on the keyboard **521**, the keyboard stays in focus.

Referring back to FIG. **4**A, following the detection of two substantially simultaneous touch inputs, the portable multifunction device **100** determines whether prior to detecting the touch inputs, there is an existing selection of the content at **411**. By a selection it is meant that certain text, graphics, or other objects are selected (e.g., shown as highlighted text). If the device **100** does not detect an existing selection, the device **100** then determines the type of touch input at **413**. The portable multifunction device **100** can identify at least four types of the touch inputs, namely, drag, tap, hold-and-drag, and flick, among others. In some embodiments, a drag input is a sliding gesture along the surface of the touch screen. In some embodiments, a tap is a touch contact followed by a lift-off or release of contact from the surface of the touch screen, without any intervening sliding gesture detected between the touch and the lift-off. In some embodiments, a hold-and-drag is an initial touch contact, followed by a predetermined period of time greater than zero (the hold period) (e.g., 1.5 seconds), and then followed by a sliding gesture on the surface of the touch screen away from the initial point of contact, without any intervening lift-off or release of contact from the surface of the touch screen. In some embodiments, a flick is a rapid sliding gesture in a

single direction along the surface of the touch screen followed by a lift-off or release of contact from the surface of the touch screen.

Depending on the type of the touch input received, the device **100** performs different actions. As shown in FIG. **4**A, if a drag is detected immediately after the two touch inputs are detected at **402** (e.g., with no intervening lift-off), then the device **100** moves the cursor, at **421**. In some embodiments, prior to dragging the cursor, the cursor is animated (e.g., enlarged) to clearly indicate the beginning of a cursor movement. In some embodiments, a ghost cursor is displayed while the cursor is being moved or instead of the actual cursor being moved. For example, a ghost cursor can be a cursor with a different appearance, such as a lighter colored cursor, that is offset from the cursor but linked to it, so that when the cursor moves around the screen, so does the ghost cursor. Alternatively, the ghost cursor is a lighter colored cursor, while the cursor is moved around the screen by the user, the ghost cursor shows the closest right position for the cursor, until a lift off event occurs, whereafter the real cursor replaces the ghost cursor at the position of the ghost cursor when the lift off event occurred. If a tap is detected (e.g., if after the two touch inputs are detected at **402**, a lift-off is detected without any intervening swipe gesture), then a portion of the document, such as a word, image, or other object closest to the cursor is selected, at **442**. If a hold and drag is detected (e.g., the touch inputs remain in contact with the screen without moving for a predetermined period of time before the drag gesture occurs), then the device **100** starts selecting text and/or graphics while the selection is extended in the direction of the drag gesture, at **452**. If a flick is detected, then the device **100** moves the cursor to a distal point of the text of the document, at **430**. For example, the distal point in the text is the end or beginning of a line or a top or bottom of a page or document. Examples are described in further detail below with respect to each type of touch input.

For example, if the type of touch input is a drag and the touch input is not located on a selection, then the device **100** moves the cursor and displays a ghost cursor at **421**. FIG. **5**A illustrates an exemplary user interface for dragging cursor when there is no existing selection of content, in accordance with some embodiments. In this embodiment, the electronic document **500** is displayed in the user interface of an application (e.g., a word processing application **152**, a presentation application **153**, a spreadsheet application **155**, or the like). The application user interface in which document **500** is displayed may include toolbar **510** and button(s) **512** for navigating to, if any, other documents. Electronic document **500** includes content, such as text, images, objects, tables, charts, and so on. In addition to displaying the content of the electronic document, the device **100** further displays a cursor **522-1** within the electronic document. In some embodiments, the cursor **522-1** is the same as an insertion point. In some embodiments, the insertion point marker is identified by an insertion point marker **522-1**.

While document **500** is displayed in a document editing mode, keyboard **521** is also displayed. A user may enter text into document **500** by typing on keyboard **521**, and confirm completion of editing of document **500** by performing a touch input (e.g., a tap on "done" button **512**) to exit an editing mode.

In some embodiments, the device **100** detects two substantially simultaneous touch inputs at a first region **524-1**, **524-2** on the touch screen display **112**. The device **100** can further determine that the two substantially simultaneous touch inputs remain in contact with the touch screen display **112**, and detect a continuous touch gesture or drag gesture from a location of the two substantially simultaneous touch inputs across the touch screen display from the first region **524-1**, **524-2** to a second region **524-3**, **524-3**. In response to detecting the continuous touch gesture, the device **100** moves the cursor or insertion point marker **522-1** across document **500** from the current location **522-1** in FIG. **5**A to a new location **522-2** in FIG. **5**B along a path **533** of the continuous gesture.

FIG. **5**B illustrates an exemplary user interface brought about by the drag gesture of FIG. **5**A, in accordance with some embodiments. In some embodiments, as soon as the device **100** determines that there is a drag gesture (**421** of FIG. **4**A), it displays a ghost cursor **522-2** offset from the real cursor **522-1**. In this embodiment, when the user drags their two-fingers around the screen, both the cursor **522-1** and the ghost cursor **522-2** move together, e.g., the ghost cursor is linked to the actual cursor. The position of this ghost cursor is the position in the document where the actual cursor will be placed when the user lifts their fingers from the screen (e.g., a lift-off event of the two-fingers), e.g., while dragging, the ghost cursor **522-2** moves in the direction of the two-finger drag gesture, and indicates the position where the cursor **522-1** will be dropped or displayed when the user lifts the two fingers. In some embodiments, the ghost cursor **522-2** has a different appearance to the cursor **522-1**. For example, the ghost cursor **522-2** can have a different color, size, and/or shape to the cursor **522-1**. The ghost cursor **522-2** can also be animated to get the user's attention. For example, the animation of the cursor **522-1** can include shrinking, enlarging, rotating, blinking, and/or flipping, or the like.

In another embodiment, instead of moving the cursor while dragging two-fingers (e.g., a two-finger slide gesture), the ghost cursor **522-2** moves but not the actual cursor. In some embodiments, a distance between the first region **524-1**, **524-2** and the second region **524-3**, **524-4** of the touch inputs in FIG. **5**A is substantially the same as a distance between the original location of the cursor shown in FIG. **5**A and a new location of the cursor shown in FIG. **5**B. On release of the two-finger drag, the device **100** places the cursor **522-1** at the location of the ghost cursor **522-2**. As a result, upon detecting the termination of the continuous touch gesture, the device **100** ceases display of the ghost cursor **522-2**, and the insertion marker **522-3** replaces the ghost cursor **522-2**, as shown in FIG. **5**C.

The above examples as shown in FIGS. **5**A-**5**C illustrate cursor manipulation in response to detecting a drag gesture when there is no existing selection of content. Referring back to FIG. **4**A, if there is existing selection of content in the document (**411**—Yes) (e.g., a word is selected), then the device **100** determines if the touch inputs are located on the selection at **415**. If the device **100** determines that the touch inputs are located on the selection (**415**—Yes), the device then determines the type of touch input at **417**. If the touch input is a drag gesture, then the device **100** dismisses the selection and moves the cursor in a direction of the drag at **433**. FIGS. **5**D-**5**E illustrate exemplary user interfaces implementing step **433** in response to a drag gesture.

For example, as shown in FIG. **5**D, the device **100** detects a selection of a portion of the content **500** and displays the selection **528**. For example, the selection of "ought" from the word "brought" is highlighted as selected. In some embodiments, the device **100** displays markers, such as a start-point object **526** and an end-point object **530** at respective ends of "ought" to indicate the selection **528**. The device **100** can detect two substantially simultaneous touch inputs

at a first region **524-1** on the touch screen display followed by a continuous touch movement or drag gesture of the two substantially simultaneous touch inputs across the touch screen display from the first region **524-1** to a second region **524-2**. The first region **524-1** is at least partially over the selection **528**. In response to detecting the continuous touch movement or drag gesture, the device **100** dismisses the selection **528** and moves the cursor **522** to a new location as shown in FIG. **5**E. In some embodiments, the new location is at a proximate location of the termination of the two-finger drag.

In some embodiments, in addition to the selection indicators **526-530**, the device **100** displays a command display area adjacent to the selected content **528** as shown in FIG. **5**AR and described in greater detail below. The command display area includes affordances such as an affordance for cutting the selected content **528** and an affordance for copying the selected content **528** (e.g., "Cut" icon **542** and "Copy" icon **544** in FIG. **5**AR). In some embodiments, the command display area is displayed every time text is selected. In some embodiments, when the text is selected by two substantially simultaneous touch inputs, the command display area is not displayed until the device **100** detects a tap on the selected text.

Referring back to FIG. **4**A, in some embodiments, if the device **100** determines that the touch inputs are not on the selection (**415**—No) (e.g., outside the selection), and then determines at **419** that the touch inputs are a drag gesture, then the device **100** expands the selection in accordance with the dragging gesture at **434**.

For example, prior to detecting touch inputs, the device **100** detects an existing selection of a portion of the content and displays the selection. The selection is highlighted, and the device **100** displays markers, such as a start-point object and an end-point object at respective ends of the selection. After displaying a soft keyboard that has a changed appearance in response to detecting two substantially simultaneous touch inputs on the soft keyboard, the device **100** detects a continuous movement of the two substantially simultaneous touch inputs from a first location on the soft keyboard to a second location anywhere on the touch screen display (e.g., within the boundaries of the soft keyboard or beyond the soft keyboard and onto the content region) without breaking contact with the touch screen display. In response to detecting the continuous movement that started on the soft keyboard outside the selected content, the device expands the selected content to include additional content beyond the portion in a direction towards the second location in response to detecting the continuous movement.

In some embodiments, when expanding the selected content, the selection can expand either backward or forward. The initial direction of the drag gesture determines the direction of the expansion. For example, a right and/or down continuous movement moves the end-point object right and/or down without moving the start-point object in order to expand the selection forward; while a left and/or up drag gesture moves the start-point object **530** left and/or up without moving the end-point object in order to expand the selection backward. In some embodiments, the selection expands one word at a time if the continuous movement is fast, and expands one character at a time if the continuous movement is slow.

In some embodiments, in accordance with a determination that the touch inputs are not on the selection (**415**—No) (e.g., outside the selection) and determines at **419** that the touch inputs are a drag gesture, the device **100** dismisses the selection and moves the cursor in a direction of the drag gesture.

FIGS. **5**A-**5**E above illustrate cursor manipulation in response to detecting a drag gesture. In addition to drag, the device **100** can detect the touch inputs as a flick and perform corresponding actions. As used herein, a flick gesture is the same type of motion as a swipe gesture in that both slides the finger(s) across the touch screen display in one direction. However, different from swipe, a flick gesture is a faster movement across the touch screen display. In some embodiments, the device **100** detects a flick gesture, e.g., a swipe gesture that is performed at a speed higher than a predetermined speed, or an acceleration beyond a predetermined velocity. Referring back to FIG. **4**A, after determining that there is no selection (**411**—No), and that the touch input is a flick gesture, the device **100** moves the cursor to a distal point of line at **430**. If the flick was up or down, the cursor would be moved to the top or bottom of a page or document, respectively. FIGS. **5**F-**5**G illustrate exemplary user interfaces of moving the cursor to a distal point in the text.

For example, in FIG. **5**F, electronic document **500** includes content, such as text, images, objects, tables, charts, and so on is displayed on the touch screen display **112**. In addition to displaying the content of the electronic document, without detecting any existing selection, the device **100** further displays a cursor **522** within the electronic document. In some embodiments, the cursor **522** is the same as an insertion point. The insertion point marker is identified by an insertion point marker **522** placed between the letter "c" and "e" in the word "conceived". The device **100** detects a two-finger flick gesture on the touch screen display in a direction **524** towards an edge of the touch screen display as shown, such as a left two-finger flick towards the left edge of the touch screen display **112**. In response to detecting the two-finger left flick gesture, the device **100** moves the cursor **522** to a distal point of the text, as shown in FIG. **5**G where the cursor **522** has been moved to the beginning of the line containing the word "conceived." If the flick was up or down, the cursor would be moved to the top or bottom of a page or document, respectively. In some embodiments, the two-finger flick gesture detected on the touch screen display **112** is in a direction along the line within the text where the cursor **522** is displayed, and the distal location of the line is at a location in the direction of the two-finger flick. In those embodiments where the flick is vertical, e.g., perpendicular to the line of text, either up or down, the cursor would be moved to the top or bottom of a page or document, respectively.

The above examples as shown in FIG. **5**F-**5**G illustrate cursor manipulation in response to detecting a flick gesture when there is no existing selection of content. Referring back to FIG. **4**A, on the other hand, if there is existing selection of content detected by the device **100** (**411**—Yes), then the device **100** determines if the touch inputs are located on the selection at **415**. If the device **100** determines that the touch inputs are located on the selection (**415**—Yes), and the device determines at **417** that the touch input is a flick gesture, then the device **100** dismisses the selection and moves the cursor to the distal point (e.g., beginning or end) of the text (e.g., line, page or document) at **444**.

Similarly, if the device **100** determines at **415** that the touch inputs are not on the selection (**415**—No) (e.g., outside the selection), and determines at **419** that the touch input is a flick gesture (also known as a "swipe" gesture), then the selection is again dismissed and the cursor is moved

to the distal point of the text at **445**. FIGS. **5**H-**5**I illustrate exemplary user interfaces implementing step **445** in response to flick.

For example, as shown in FIG. **5**H, the device **100** detects an existing selection of a portion of the content **500** and displays the selection **528**. The selection of "ought" is highlighted, and the device **100** displays markers, such as a start-point object **526** and an end-point object **530** at respective ends of "ought" to indicate the selection **528**. The device **100** detects a two-finger flick gesture on the touch screen display in a direction **524** towards an edge of the touch screen display. In response to detecting a two-finger left flick gesture, the device **100** dismisses the selection **528** before moving the cursor **522** to a distal point of the text, such as to the beginning of the line where the cursor **522** was initially located, as shown in FIG. **5**I.

Though FIGS. **5**F-**5**I illustrate cursor manipulation in response to a left flick or swipe, similarly, a right flick or swipe towards right edge of the touch screen display **112**, an up flick or swipe towards top edge of the touch screen display **112**, and a down flick or swipe towards bottom edge of the touch screen display **112** can be detected by the device **100**. In response to the right, up, and down flick or swipe, the device **100** moves the cursor to the end of line, beginning of page, and end of page, respectively.

Referring back to FIG. **4**A, in addition to determining the type of touch inputs as drag and flick, the device **100** can detect the type of touch inputs as tap and perform corresponding actions. After determining the type of the touch inputs is tap and the touch inputs that are not located on a selection, the device **100** selects the closest word to the cursor at **442**. FIGS. **5**J-**5**P illustrate exemplary user interfaces of selecting the closest word to the cursor in step **442**.

For example, in FIG. **5**J, electronic document **500** is displayed in the user interface of an application (e.g., a word processing application **152**, a presentation application **153**, a spreadsheet application **155**, etc.). The application user interface in which document **500** is displayed may include toolbar **510** and button **512** for navigating to, if any, other documents. Electronic document **500** includes content, such as text, images, objects, tables, charts, and so on. In addition to displaying the content of the electronic document, the device **100** further displays a cursor **522** within the electronic document. In some embodiments, the cursor **522** is the same as an insertion point. The cursor **522** indicates the insertion point in the electronic document **500** as on a word "score", between the character "s" and "c" of the word "score".

Subsequently, while displaying the content of the document **500**, and when there is no existing selection (**411**—No of FIG. **4**A), the device **100** detects two substantially simultaneous touch inputs **524** that are not located on a selection (**442** of FIG. **4**A). Turning to FIG. **5**K, in response to detecting the touch inputs, the device **100** determines the touch inputs are not located on a selection, and selects the word "score", since it is the closest to the cursor **522**. The selection of the word "score" is displayed and highlighted, and the device **100** displays markers, such as a start-point object **526** and an end-point object **530** at respective ends of "score" to indicate the selection **528**.

In some embodiments, a word is selected if the cursor **522** is within the word (e.g., the word "score" in FIGS. **5**J-**5**K), adjacent to the first letter of the word (e.g., the word "Four" in FIGS. **5**L-**5**M), or adjacent to the last letter of the word (e.g., the word "forth" in FIGS. **5**N-**5**O). In some embodiments, the closest word and any punctuation and/or spaces are selected if the cursor **522** is currently located after a sentence and not within a word or adjacent to the first or last letter of a word (e.g., "equal." in FIGS. **5**P-**5**Q).

It should be noted that in FIGS. **5**J-**5**P, the two substantially simultaneous touch inputs **524** can be located anywhere on the touch screen display, not just where the cursor is located. Conventional portable multifunction devices often require users to precisely contact their fingers on a touch sensitive screen at the location where the cursor is located in order to manipulate the cursor. Such a requirement is cumbersome. The methods described herein allow a user manipulate a cursor and perform editing functions, such as text selection and moving selection, from any part of the touch-sensitive surface **112**, not just where the cursor is located. For example, the two substantially simultaneous touch inputs **524** can be located after a first paragraph but before a second paragraph (e.g., FIG. **5**J), on a different word not adjacent to the cursor **522** (e.g., FIG. **5**L), on the touch screen keyboard (e.g., FIG. **5**N), or on the word that the cursor is located within (e.g., FIG. **5**P), among others. These methods reduce the number of steps that a user has to perform to navigate and edit a document, thereby increasing efficiency and ease of use when performing these tasks.

The above examples as shown in FIG. **5**J-**5**P illustrate cursor manipulation in response to detecting tap when there is no existing selection of content. Referring back to FIG. **4**A, on the other hand, if there is an existing selection of content detected by the device **100**, then the device **100** determines if the touch inputs are located on the selection at **415**. If the device **100** determines that the touch inputs are located on the selection (**415**—Yes), and determines at **417** that the touch inputs are a tap, then the device **100** expands the selection at **440**. For example, if a word is selected, and a tap **440** is detected, then the sentence containing the previously selected word is selected. In this way a selection can be expanded from a word to a sentence to a paragraph to a page to a document. In some embodiments, instead of expanding the selection, a single two-finger tap on a selected word deselects the word and returns to an initial cursor placement display (e.g., ceasing display of the selection indication **528** and displaying a cursor on the touch screen display). In some embodiments, the placement of the cursor depends on the location of the single two-finger tap.

On the other hand, if the device **100** determines at **415** that the touch inputs are not on the selection (**415**—No) (e.g., outside the selection) and determines at **419** that the touch inputs are a tap, then the device **100** determines whether the selected content is one word at **466**. In accordance with a determination that the selected content is one word (**466**—Yes), the device **100** expands the selected content to include a sentence containing the word at **467**. On the other hand, in accordance with a determination that the selected content is more than a word, the device **100** displays a cursor at the beginning or end of the selection and dismisses the selection at **468**. In some embodiments, in accordance with a determination that the tap is not on the selection, the device **100** dismisses the selection and selects the closest word to the contact point of the tap.

In other embodiments, after selecting the closest word to the cursor, the device **100** can further detect a two-finger double-tap (e.g., tapping twice with two fingers), a two-finger triple-tap (e.g., tapping three times with two fingers), or a two-finger quadruple-tap (e.g., tapping four times with two fingers). In response to detecting a two-finger double-tap, two-finger triple-tap, or two-finger quadruple-tap, the device **100** expands the selection to a sentence or a line at **460**, to a paragraph at **462**, or to the document at **464**, respectively. In some embodiments, the selection expansion

operation is only operable to paragraph level. For example, in response to a two-finger quadruple-tap, the device **100** keeps the paragraph selected without further expanding the selection to the entire document at **464**. In some embodiments, device **100** determines if there is a multi-tap and expands the selection if the duration between each subsequent tap is less than a predetermined threshold (e.g., 0.66 seconds).

In some embodiments, if the device **100** determines two substantially simultaneous touch inputs that are located outside an existing selection (**415**—No) (e.g., on a soft keyboard) and the type of touch inputs is a tap (down), followed by a lift-off (up), followed by another tap (down), and without lift-off, a drag (**419**—Tap-±half±drag), the device **100** at step **465** first dismisses the selection, then performs actions similar to those performed at step **471** in FIG. **4**B described below, such as selecting a word closest to the touch input and expanding the selection while dragging. In some embodiments, similar to the selection expansion behavior described with respect to steps **452** and **434** above, the initial direction of the drag gesture determines the direction of the expansion and the selection expands one word at a time if the drag gesture moves fast, and expands one character at a time if the drag gesture moves slow.

FIGS. **5**R-**5**S illustrate exemplary user interfaces for implementing a tap that is detected outside a selection and selecting the closest word to a contact point of the tap. FIGS. **5**T-**5**Y illustrate exemplary user interfaces implementing the steps **460**-**464** (FIG. **4**A) of expanding the selection in response to a two-finger double-tap, a two-finger triple-tap, and a two-finger quadruple-tap. FIGS. **5**Z-**5**AD illustrate exemplary user interfaces for implementing step **440** of expanding the selection in response to tapping on a selection.

Turning to FIG. **5**R, which illustrates an exemplary user interface of selecting the closest word to a contact point of a two-finger tap in accordance with some embodiments. In some embodiments, an existing selection **528** (e.g., the word "equal") is detected by the device **100**, a cursor is not displayed on the touch screen display. In response to detecting the two substantially simultaneous touch inputs **524** located outside the selection **528** (e.g., on the word "any" in FIG. **5**S), the device **100** selects a word closest to the contact location of the two substantially simultaneous touch inputs **524** (e.g., selects the word "any" **528** in FIG. **5**S).

FIGS. **5**T-**5**Y illustrate the steps **442** and **460**-**464** (FIG. **4**A) of cursor manipulation in response to two-finger single tap, two-finger double-tap, two-finger triple-tap, and two-finger quadruple-tap, in accordance with an alternative embodiment. When there is no existing selection (**411**—No) (FIG. **4**A), in response to detecting a two-finger tap **524** (FIG. **5**T), and when the cursor **522** is located closest to the word "and," the device **100** selects (**442**—FIG. **4**A) the word "and" and displays markers, such as a start-point object **526** and an end-point object **530** at respective ends of "and" to indicate the selection **528**, as shown in FIG. **5**U.

In some embodiments, upon determining that there is an existing selection **528** (**411**—Yes, FIG. **4**A), e.g., following the two-finger tap as shown in FIG. **5**U, the device **100** detects a two-finger double-tap at a contact point not on the selection (**415**—No, **419**, and **460** of FIG. **4**A). In some embodiments, the two-finger double-taps need to be at or near the same contact point on the touch screen display and made within a short predetermined time of one another, e.g., 0.5 seconds. In response to detecting the two-finger double-tap (**460** of FIG. **4**A), the device **100** selects a first predetermined expanded portion of the content (e.g., a line or a sentence) that includes at least a portion of the previously selected content **528**. For example, the single line of text ("any nation so conceived and so") containing the word "and" is selected with a start-point object **526** and an end-point object **530** at respective ends of the single line of text selection **528**, as shown in FIG. **5**V, or the sentence ("Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure") containing the word "and" is selected with a start-point object **526** and an end-point object **530** at respective ends of the sentence selection **528**, as shown in FIG. **5**W.

In some embodiments, upon determining that there is an existing selection (**411**—Yes, FIG. **4**A), e.g., following the two-finger double-tap to select a line or a sentence shown in FIG. **5**V or **5**W, the device **100** detects a two-finger triple-tap at a contact point not on the selection (**415**—No, **419**, and **462** of FIG. **4**A). In some embodiments, the two-finger triple-taps need to be at or near the same contact point on the touch screen display and made within a short predetermined time of one another, e.g., 0.5 seconds. In response to detecting the two-finger triple-tap (**462** of FIG. **4**A), the device **100** selects a second predetermined expanded portion of the content (e.g., a paragraph) that includes at least a portion of the previously selected content **528**, as shown in FIG. **5**X. As further shown in FIG. **5**X, to indicate the paragraph selection **528**, the device **100** displays the second expanded portion of the content as selected content and displays markers, such as a start-point object **526** and possibly an end-point object (not shown in FIG. **5**X) at respective ends of the paragraph selection **528**.

In some embodiments, upon determining that there is an existing selection (**411**—Yes, FIG. **4**A), e.g., following the two-finger triple-tap to select a paragraph shown in FIG. **5**X, the device **100** detects a two-finger quadruple-tap at a contact point not on the selection (**415**—No, **419**, and **464** of FIG. **4**A). In some embodiments, the two-finger quadruple-taps need to be at or near the same contact point on the touch screen display and made within a short predetermined time of one another, e.g., 0.5 seconds. In response to detecting the two-finger quadruple-tap (**464** of FIG. **4**A), the device **100** selects a third predetermined expanded portion of the content (e.g., a page or document) that includes at least a portion of the previously selected content **528**, as shown in FIG. **5**Y.

It should be noted that expansion of the selection illustrated in FIGS. **5**T-**5**Y is performed in response to successive touch inputs. FIGS. **5**T-**5**Y illustrate exemplary user interfaces corresponding to the steps **460**-**464** in FIG. **4**A after the device determines that the touch inputs are located outside a selection or not on or over a selection. In some embodiments, the duration between each successive touch input in a multi-tap input is less than a predetermined amount, such as less than 0.25 seconds. For example, a two-finger quadruple-tap is four two finger taps in rapid succession. In response to a two-finger double-tap, the selection is expanded to a sentence or line; In response to a two-finger triple-tap, the selection is expanded to a paragraph; and in response to a two-finger quadruple-tap, the selection is expanded to the page or document.

FIGS. **5**Z-**5**AD are used to illustrate the step **440** (FIG. **4**A) of expanding the selection in response to tapping on a selection. After detecting two substantially simultaneous touch inputs at **402** (FIG. **4**A), and detecting that there is an existing selection (**411**—Yes) (FIG. **4**A), and determining that the touch inputs were made on or over a selection (**415**—Yes), the device determines the type of touch inputs that were detected **417** (FIG. **4**A). When the device deter-

mines that the touch inputs are a tap over an existing selection, then the existing selection is expanded at **440**. This is shown in FIGS. **5**Z-**5**AD. FIG. **5**Z shows an existing selection **528** of the word "and" with displayed markers, such as a start-point object **526** and an end-point object (not shown) at respective ends of the word to indicate the selection **528**. FIG. **5**Z also shows the two substantially simultaneous touch inputs **524** detected as a tap for expanding the selection to the next largest size of selection, e.g., word to line, line to sentence, sentence to paragraph, paragraph to page, page to document, or the like. For example, when the selected content is a word (or a plurality of words that are part of a single line or a sentence), the selected content can be expanded to a single line of text (as shown in FIG. **5**AA) or a sentence (as shown in FIG. **5**AB) containing the word "and."

In a similar vein, in some embodiments, the device **100** determines that the location of the tap **524** is on a selection **528** of a single line of text (FIG. **5**AA) or a sentence (FIG. **5**AB). In response to detecting the tap **440** (FIG. **4**A), as shown in FIG. **5**AC, the device **100** expands the selection **528** to a paragraph containing the single line of text or the sentence. In some embodiments, to indicate the paragraph selection **528**, the device **100** displays markers, such as a start-point object **526** and possibly an end-point object **530** (not shown in FIG. **5**AC) at respective ends of the paragraph selection **528**. In some embodiments, the device **100** can further determine the location of the tap **524** is on a selection **528** of a paragraph (FIG. **5**AC). In response, as shown in FIG. **5**AD, the device **100** expands the selection **528** to the electronic document. To indicate the document selection **528**, the device **100** displays markers, such as a start-point object **526** and possibly an end-point object **530** (not shown in FIG. **5**AD) at respective ends of the document selection **528**.

It should be noted that the selection expansion in response to successive touch inputs illustrated in FIGS. **5**T-**5**Y is different from the selection expansion illustrated in FIGS. **5**Z-**5**AD. FIGS. **5**Z-**5**AD illustrate exemplary user interfaces corresponding to the step **440** in FIG. **4**A after the device **100** determines the touch inputs are located on a selection. In contrast, FIGS. **5**T-**5**Y illustrate exemplary user interfaces corresponding to the steps **460**-**464** in FIG. **4**A after the device determines the touch inputs are located outside a selection or not on or over a selection. As stated with respect to FIGS. **5**J-**5**P above, the two substantially simultaneous touch inputs **524** in FIG. **5**T can be located anywhere on the touch screen display **112**. In response to the first two-finger tap, a word closest to the cursor is selected, as shown in FIG. **5**U. Subsequently each additional two-finger tap on the touch screen display **112** is detected by the device **100**. In some embodiments, the duration of each contact is less than a predetermined threshold such that the additional two substantially simultaneous touch inputs can be detected as a two-finger double-tap, two-finger triple-tap, and two-finger quadruple-tap etc. In response to the double-tap, the selection is expanded to a sentence or line; in response to a triple-tap, the selection is expanded to a paragraph; and in response to a quadruple-tap, the selection is expanded to the page or document. In contrast, the device **100** performs the selection expansion as shown in FIGS. **5**Z-**5**AD in response to detecting independent touch inputs on a selection. Thus, the touch inputs illustrates in FIGS. **5**Z-**5**AD are detected by the device **100** as separate touch events, not as successive touch events in a single sequence.

Referring back to FIG. **4**A, in addition to determining the type of touch inputs as drag, flick, and tap, the device **100** can detect the type of touch inputs as hold and drag. If the device **100** does not detect an existing selection (**411**—No), in response to determining **413** the type of touch inputs as hold and drag, the device **100** initiates selecting a portion of the document and extends the selection commensurate with the dragging gesture at **452**. To determine if the inputs are a hold and drag gesture as compared to simply a drag gesture, the device determines if the touch inputs remain in contact with the screen without moving for a predetermined period of time (e.g., >0.75 seconds or >1 second) before the drag gesture occurs. In some embodiments, the selection starts at the point of contact and expands in the drag direction.

If the device **100** detects an existing selection (**411**—Yes), and further determines that the touch inputs are located on an existing selection (**415**—Yes), and then determines at **417** that the inputs are a hold and drag, then the device **100** moves the selection at **451**. In some embodiments, the selected text remains in place with only a cursor moving, and only once the user releases contact with the touch screen surface (e.g., a lift-off event) is the selected text moved to the position of the cursor at the time of the lift-off or release. In other embodiments, the selection is dragged around the document and placed at the position of the selection (or a cursor) at the time of contact release or lift off. In yet another embodiment, a ghost copy of the selection is dragged around the document, while the original selection remains in place, and only placed at the position of the selection (or a cursor) at the time of contact release or lift off.

If the touch inputs are not located on an existing selection (e.g., outside an existing selection) (**415**—No), the device **100** determines the type of selection at **419**, and if the type is a hold and drag **453**, expands the existing selection in the direction of the drag gesture at **453**. Here, the expanded selection includes the original selection and any expanded portion of the document. FIGS. **5**AE-**5**AG illustrate the step **452** of expanding the selection while dragging. FIGS. **5**AH-**5**AJ illustrate exemplary user interfaces implementing the step **451** of moving an existing selection. FIGS. **5**AK-**5**AL illustrate exemplary user interfaces implementing the step **453** of starting a selection and extending the selection while dragging.

FIGS. **5**AE-**5**AG illustrate the step **452** (FIG. **4**A) of expanding the selection while dragging. In FIG. **5**AE, the device **100** determines that prior to detecting the two-finger touch inputs, there is no existing selection. In response to detecting the two-finger touch contacts **524**, followed by a predetermined period of time, followed by a dragging gesture **532** (FIG. **5**AF), the device **100** determines that the inputs are a hold and drag gesture and starts a selection at the cursor **522** and expands it in a direction of the drag gesture **532**. For example, the cursor is located between the letters "br" and "ought" and the dragging gesture is in the right direction so expansion of the selection is in the right direction to select "ought" **528**. If the dragging continues in a rightward and downward direction, where a release or lift-off event occurs at **531**, the selection ("ought forth on this continent . . . in a great") **528** is shown in FIG. **5**AG.

FIGS. **5**AE-**5**AG illustrate expanding the selection **528** in accordance with the dragging gesture **532**. In some embodiments, the selection can expand either backward or forward. The initial direction of the drag gesture **532** determines the direction of the expansion. For example, a right (e.g., FIG. **5**AF) and/or down drag gesture **532** moves the upside down lollipop shaped end-point object **530** right and/or down without moving the lollipop shaped start-point object **526** in order to expand the selection **528** forward; while a left and/or up drag gesture moves the lollipop shaped start-point

object **526** left and/or up without moving the upside down lollipop shaped end-point object **530** in order to expand the selection **528** backward. In some embodiments, the selection **528** expands one word at a time if the drag is fast, and expands one character at a time if the drag is slow.

FIGS. **5**AH-**5**AJ illustrate the step **451** (FIG. **4**A) of moving an existing selection. Once the device detects two substantially simultaneous touch inputs at **402** (FIG. **4**A), determines that there is an existing selection (**411**—Yes) (FIG. **4**A), and determines that the inputs are on a selection (**415**—Yes) (FIG. **4**A), then the device determines the type of input at **417** (FIG. **4**A). If the type is a hold and drag, as described above, then the selection is moved at **451**. In FIG. **5**AH, the device **100** detects two substantially simultaneous touch inputs at a first region **524-1** on the touch screen display. The first region **524-1** is at least partially on or over a location of a selection **528-1**, which may be marked by markers, such as a start-point object **526-1** and an end-point object **530-1** at respective ends of a partial word "ought". The device **100** further detects the two substantially simultaneous touch inputs remaining motionless on the touch screen display for a predetermined duration followed by a continuous drag gesture (e.g., start dragging within 0.5 or 0.75 seconds after remaining motionless) from the location of the two substantially simultaneous touch inputs in a direction **532** across the touch screen display from the first region **524-1** to a second region **524-2**. In response to detecting the continuous touch movement, the device **100** moves the selection **528-1** across document **500** to a new location **528-2** as shown in FIG. **5**AI following the continuous movement.

As mentioned above, in some embodiments, instead of moving the selection **528-1**, a ghost selection **528** is displayed in response to the detection of the two-finger dragging. As shown in FIG. **5**AI, in some embodiments, the ghost selection **528-2** is displayed offset from the selection **528-1**, and in some embodiments, the ghost selection **528-2** can have a different appearance to the selection **528-1**. For example, the ghost selection **528-2** can have a different color and/or shade to highlight the ghost selection **528-2** from the color and/or shade used to highlight the selection **528-1**. Further, the ghost markers **526-2** and **530-2** mark the beginning and the ending of the ghost selection block **528** can have different color, size, and/or shape from the markers **526-1** and **528-1**.

In some embodiments, the ghost selection **528-2** appears at location of the current position of the selection **528-1** as soon as the device **100** detects the two-finger dragging, and the start-point object **526-1** and the end-point object **530-1** can animate to attract the users attention to the appearance of the ghost selection **528-2**. While dragging, the ghost selection **528-2** moves in the direction of the two-finger movement to indicate the position to where the selection will be moved when the user lifts or releases the contact (e.g., at the lift-off event). The ghost selection **528-2** may include a ghost start-point object **526-2** and a ghost end-point object **530-2**. Both the ghost start point object **526-2** and the ghost end-point object **530-2** may have different appearances from the start point object **526-1** and the end-point object **530-1**. On release of the two-finger drag, the selection moves to the location of the ghost selection **528-2**. At release of the contacts, the device **100** ceases the display of the ghost selection **528-2** along with the ghost markers **526-2** and **530-2** as shown in FIG. **5**AJ. In FIG. **5**AJ, the selection **528-3** is indicated by markers, such as a start-point object **526-3** and an end-point object **530-3**. Other suitable mechanisms for displaying the movement of the selection are described above.

Turning to FIG. **5**AK, FIGS. **5**AK-**5**AL illustrate exemplary user interfaces implementing step **453** (FIG. **4**A) of starting a selection and extending the selection while dragging, when the hold and drag are not located on an existing selection (e.g., outside an existing selection in the content region or outside the existing selection on the soft keyboard), in accordance with some embodiments. In FIG. **5**AK, after detecting two substantially simultaneous touch inputs **524-1** (**402** of FIG. **4**A), the device **100** determines that there is an existing selection (**411**—Yes) (FIG. **4**A). The device **100** further determines at **415** that the touch inputs are not on the selection (**415**—No) (FIG. **4**A) (e.g., outside the selection) and determines at **419** that the touch inputs are hold and drag. In response to determining the type of the touch inputs is a hold and drag, the device **100** expands the existing selection in the direction of the drag gesture at **453**.

For example, as shown in FIG. **5**AK, the device **100** detects the two substantially simultaneous touch inputs **524-1** remaining motionless on the touch screen display for a predetermined duration followed by a continuous drag gesture (e.g., start dragging within 0.5 or 0.75 seconds after remaining motionless) from the location of the two substantially simultaneous touch inputs in a direction **532** across the touch screen display from the first region **524-1** to a second region **524-2**. In some embodiments, the drags are detected by the device **100** as a continuous touch movement across the touch screen display from the first location **524-1** to the second location **524-2**.

As shown in FIG. **5**AK, an existing selection **528-1** (e.g., the part "ought" of the word "brought") is detected by the device **100** and a cursor is not displayed on the touch screen display. In some embodiments, while the selection **528** is displayed, the device **100** also display a cursor and the cursor moves in accordance with the drag gesture. In response to detecting the two substantially simultaneous touch inputs **524-1** located outside the selection **528** (e.g., located below the selection "ought" in FIG. **5**AK), the device **100** expands the original selection **528-1** in the direction of the drag gesture **532**. In FIG. **5**AK, the dragging gesture is in the rightward and downward direction towards **524-2**. As a result, the expansion of the selection **528-1** is in the right and downward direction. When a release or lift-off event occurs at **524-2**, the selection ("ought forth on this continent . . . in a great") **528** is shown in FIG. **5**AL. In FIG. **5**AL, the selection **528** is indicated by markers, such as a start-point object **526** and an end-point object **530**.

FIGS. **5**AK-**5**AL illustrate expanding the selection in accordance with the continuous touch movement **532**. In some embodiments, the selection can expand either backward or forward. The initial direction of the drag gesture **532** determines the direction of the expansion. For example, a right and/or down (as shown in FIG. **5**AK) drag gesture **532** moves the upside down lollipop shaped end-point object **530** right and/or down without moving the lollipop shaped start-point object **526** in order to expand the selection **528** forward; while a left and/or up dragging gesture moves the lollipop shaped start-point object **526** left and/or up without moving the upside down lollipop shaped end-point object **530** in order to expand the selection **528** backward. In some embodiments, the selection **528** expands one word at a time if the drag is fast, and expands one character at a time if the drag is slow.

FIG. **4**B is a flow chart illustrating a method **470** of cursor manipulation with a single touch input (e.g., a single-finger

touch input), in accordance with some embodiments. The method **470** is performed at a portable multifunction device (e.g., the device **100** in FIG. **1**A) with a touch screen display (e.g., the touch screen display **112** in FIG. **1**A). As described below, the method **470** provides an expedient mechanism for moving the cursor, selecting the content, and providing options to edit the content at a portable multifunction device with a touch screen display. This method is both faster and easier to perform than using a peripheral device, like a mouse. The method is also intuitive to a user, thereby reducing the number, extent, and/or nature of the inputs from the user when selecting content, and creating a more efficient human-machine interface. A more efficient input mechanism also requires less computing resources, thereby increasing battery life of the device.

In some embodiments, the device **100** displays content of an electronic document on the touch screen display **112**. In some embodiments, the content comprises text (e.g., plain text, unstructured text, formatted text, or text in a web page). In other embodiments, the content comprises graphics with or without text. Moreover, the content may be editable or read-only. In addition to displaying the content, when no content is selected, the device **100** may display a cursor within the electronic document. In some embodiments, while displaying the content of the electronic document, the device **100** detects a single-finger touch input (e.g., a single-finger tap) at **472**. The portable multifunction device **100** then determines whether prior to detecting the touch input, there is an existing selection of the content at **474**.

If the device **100** detects an existing selection (**474**—Yes), then the device **100** further determines if the single-finger touch input is located on the selection at **475**. If the device **100** determines that the single-finger touch input is not located on the selection (**475**—No), then device **100** dismisses the selection at **476** and proceeds to step **480**. On the other hand, if the device **100** determines that the single-finger touch input is located on the selection (**475**—Yes), the device **100** determines the type of the touch input at **477**.

If the device **100** determines the type of single-finger touch input is tap (down), lift (up), tap (down), and a drag (**477**—Tap-±half±drag), the device **100** at **487** first dismisses the selection, then performs actions similar to those performed at step **471**, such as selecting a word closest to the touch input and expanding the selection while dragging. If the device **100** determines the type of single-finger touch input is a tap (**477**—Tap), then the device **100** can perform one of three different options depending on embodiment.

In some embodiments, one of the options (Tap Option 3, **489**) is to do-nothing, such that the device **100** does not respond to the single-finger tap in accordance with a determination that the tap is located on a selection (e.g., a selected word). In some embodiment, another option includes dismissing the selection at **485** (Tap Option 1) and performing additional actions (e.g., steps **481**-**484** in FIG. **4**B) in response to the tap gesture as if there were no existing selection. In some embodiments, a third option is to dismiss the selection and place the cursor adjacent to a word within the electronic document based on the location of the single-finger input relative to the closest space to this word at **479** (Tap Option 2). With respect to this embodiment, if the single-finger touch input is on a word and the contact location of the single-finger touch input is closer to the beginning of the word, then the device **100** places the cursor before the word, since the closest space to this word is the white space before the word. Conversely, if the single-finger touch input is on a word and the contact location of the single-finger touch input is closer to the end of the word, then the device **100** places the cursor after the word, since the closest space to this word is the white space after the word.

For example, FIGS. **5**AM-**5**AN illustrate step **479** (Tap Option 2, FIG. **4**B) of dismissing a selection and moving the cursor in response to detecting an existing selection and a single-finger tap on the selection. In FIG. **5**AM, the device **100** detects a single-finger tap at a region **524** on the touch screen display **112**. The region **524** is at a proximate location of the contact point of the single singer tap to the touch screen display **112**, such as located on the word "brought", closer to the end of the word. As shown in FIG. **5**AM, the region **524** is on the selection **528**, which may be marked by markers, such as a start-point object **526** and an end-point object **530** at respective ends of a partial word "ought". In response to detecting the single-finger tap **524** outside the selection **528**, the device **100** dismisses the selection and moves to the cursor to the closest white space before the word "brought", as shown in FIG. **5**AN.

It should be noted that FIGS. **5**AM-**5**AN illustrate dismissing selection in response to tapping on an existing selection of editable text in accordance with some embodiments. In some embodiments, similar actions are performed when tapping on an existing selection of non-editable text (e.g., a web page), such that the existing selection is deselected.

Still referring to FIG. **4**B, the above steps are performed when the device **100** detects an existing selection. When there is no existing selection (**474**—No), the device **100** first determines the type of the single-finger touch input at **480**. In response to recognizing a tap gesture (**480**—Tap), the device **100** determines a distance to the closest space between two words within the electronic document at **481**. In accordance with a determination that the distance is less than a predetermined threshold distance (**483**—Yes), the device **100** moves the cursor to the closest space after a preceding word at **482**. In accordance with a determination that the distance is more than a predetermined threshold distance (**483**—No), the device **100** selects the word closest to the touch input and displays an indication of the selection on the touch screen at **484**.

For example, FIGS. **6**A-**6**B illustrate step **482** (FIG. **4**B) of moving cursor in response to a tap gesture, in accordance with some embodiments. In FIG. **6**A, content of an electronic document is displayed on the touch screen display **112**. The content includes at least one line of text, which further includes at least two words. Based on the distance to the closest white space between two words within the electronic document, the device **100** defines zones (e.g., X zones and Y zone) for each word. In some embodiments, X zones are defined as zones from the beginning or end of a word to a distance less than or equal to a percentage of the word size. In some embodiments, the Y zone is the zone between X-zones for that word, e.g., where the distance to the closest white space is greater than or equal to a percentage of the word size.

For example, in FIG. **6**A, the word "Lorem" is the first word in a line of text. The closest white space is the white space between the word "Lorem" and "ipsum". As shown in FIG. **6**A, X1 starts from the end of the word "Lorem" to a distance less than or equal to a percentage of the word size (e.g., between the letter "e" and the letter "m" of "Lorem"). Within Y1, the distance to the closest white space is greater than or equal to a percentage of the word size "Lorem". Similarly, X2-X6 start from the beginning/end of a word to a distance less than or equal to a percentage of the word size,

and within Y2-Y4, the distance to the closest white space is greater than or equal to a percentage of the word size.

In FIG. **6**A, the device **100** detects a single-finger tap **524** on the touch screen display **112**. The single-finger tap **524** is located approximately on the letter "m" of the word "ipsum" in X3. The closest white space to the single-finger tap **524** is the space between the word "ipsum" and the word "dolor". As a result of detecting the distance from the single-finger tap **524** to the closest white space between words less than a predetermined threshold distance (e.g., the distance from the touch input to the end of the word is less than X3), the device **100** places the cursor in the closest space after a preceding word (e.g., after "ipsum"), as shown in FIG. **6**B.

In another example, FIGS. **5**AO-**5**AP illustrate step **482** (FIG. **4**B) of moving the cursor when tapping on white space in between two words. In FIG. **5**AO, the device **100** detects a single-finger tap at a region **524** on the touch screen display **112**. Different from the existing selection scenario as shown in FIGS. **5**AM-**5**AN, there is no existing selection prior to the single-finger tap at the region **524**. Instead, a cursor **522-1** is displayed in the middle of the word "brought." In FIG. **5**AO, the region **524** indicates the contact point of the single-finger tap to the touch screen display is at a proximate location of the space between two paragraphs. In response to detecting the single-finger tap **524** not located on a word, the device **100** moves the cursor to the contact point **522-2** as shown in FIG. **5**AP, in between two paragraphs right after a preceding word (e.g., right after "equal.").

In yet another example, FIGS. **5**AQ-**5**AR illustrate steps **484** (FIG. **4**B) when a single-finger tap is located on a word. In FIG. **5**AQ, similar to FIG. **5**AO, there is no existing selection prior to the single-finger tap at the region **524**. Instead, a cursor **522** is displayed in the middle of the word "brought." Different from FIG. **5**AO, in FIG. **5**AQ, the region **524** indicates the contact point of the single-finger tap to the touch screen display is located on a word "conceived", approximately in the middle (e.g., in a Y zone). As a result of the distance to the closest white space between words (e.g., the white space between the word "nation," and the word "conceived") greater than a predetermined threshold distance, the device **100** selects the word "conceived" and displays the selection as shown in FIG. **5**AR. The selection is marked by The word "conceived" shown in the exemplary user interface is long enough for the device **100** to recognize the touch input located in a Y zone. In some embodiments, for short words, e.g., "as", "do", "I", due to the small size of a Y zone for such short words, the device **100** will always place the cursor and not select the word.

In FIG. **5**AR, the selection **528** may be marked by markers as an indication of the selection **528**, such as a start-point object **526** and an end-point object **530** at respective ends of a partial word "conceived." In addition, the device **100** displays a command display area **540** adjacent to the selected content **528**. The command display area **540** includes an affordance for cutting the selected content **528** and an affordance for copying the selected content **528** (e.g., "Cut" icon **542** and "Copy" icon **544** in FIG. **5**AR). In some embodiments, the command display area **540** includes an affordance for pasting previously cut or copied content (e.g., "Paste" icon **546**). Though not shown in FIG. **5**AR, in some embodiments, the command display area **540** includes an affordance for undoing a previous action, an affordance for displaying additional command options, an affordance redoing a previous action, at least one command that is user configurable, an affordance for defining the word, and/or at least one command that is context sensitive, among others.

The above examples (FIGS. **6**A-**6**B, **5**AO-**5**AP, and **5**AQ-**5**AR) illustrate various operations performed in response to a single-finger tap on editable content. In some embodiments, in accordance with a determination that the content is editable text, the device **100** displays a cursor in the content displays a soft keyboard for text editing.

Referring back to FIG. **4**B, if the device **100** determines (at **480**) the type of single-finger touch input is hold and drag, the device **100** displays a loupe and moves the cursor at **473**. FIG. **6**C illustrates an exemplary user interface of cursor movement in response to a hold and drag gesture, in accordance with some embodiments.

As used herein, a hold and drag gesture is a stationary (or substantially stationary) pressing gesture by a single-finger at a location in the content displayed on the touch screen immediately followed by a drag. For example, a single-finger contact that moves less than a predefined amount (e.g., 1-2 mm) in a predefined time (e.g., 0.2-0.5 seconds) immediately followed by a drag is a hold and drag gesture. In response to recognizing the hold and drag gesture, as shown in FIG. **6**C, the device **100** magnifies a portion of the content proximate to the contact location **524** on the touch screen **112**. The content magnifier **508** displays the magnified portion **543** of the content as well as an insertion marker **545**. The insertion marker **545** is displayed at a location within the expanded portion of the content that corresponds to the contact location of the single-finger. In some embodiments, in response to detecting a movement **532** of the single-finger across the touch screen **112**, the device **100** moves the content magnifier **508**, moves the insertion marker **545**, and changes the magnified portion **543** of the content in accordance with the detected movement of the single-finger.

Although not shown in FIG. **4**B, in some embodiments, if the device **100** determines the type of single-finger touch input is hold and drag and the touch input is located on a selection, the device **100** moves the selection. For example, FIGS. **5**AS-**5**AU illustrate step **479** (FIG. **4**B) of moving a selection when the device **100** detects a hold and drag gesture located on a selection. In FIG. **5**AS, the device **100** detects a single-finger touch input at a first region **524-1** on the touch screen display **112**. The first region **524-1** is at least partially on or over a location of a selection **528-1**, which may be marked by markers, such as a start-point object **526-1** and an end-point object **530-1** at respective ends of a partial word "ought." The device **100** further detects the single-finger touch input remains motionless on the touch screen display for a predetermined duration followed by a continuous drag gesture (e.g., start dragging within 0.5 or 0.75 seconds after remaining motionless) from the location of the singer-finger touch input in a direction **532** across the touch screen display from the first region **524-1** to a second region **524-2**. In response to detecting the continuous touch movement, the device **100** moves the selection **528-1** across document **500** to a new location **528-2** as shown in FIG. **5**AU following the continuous movement.

As mentioned above, in some embodiments, instead of moving the selection **528-1**, a ghost selection **528** is displayed in response to the detection of the single-finger dragging. As shown in FIG. **5**AT, in some embodiments, the ghost selection **528-2** is displayed offset from the selection **528-1**, and in some embodiments, the ghost selection **528-2** can have a different appearance to the selection **528-1**. For example, the ghost selection **528-2** can have a different color and/or shade to highlight the ghost selection **528-2** from the

color and/or shade used to highlight the selection **528-1**. Further, the ghost markers **526-2** and **530-2** mark the beginning and the ending of the ghost selection block **528** can have different color, size, and/or shape from the markers **526-1** and **528-1**.

In some embodiments, the ghost selection **528-2** appears at location of the current position of the selection **528-1** as soon as the device **100** detects the single-finger dragging, and the start-point object **526-1** and the end-point object **530-1** can animate to attract the users attention to the appearance of the ghost selection **528-2**. While dragging, the ghost selection **528-2** moves in the direction of the single-finger movement to indicate the position to where the selection will be moved when the user lifts or releases the contact (e.g., at the lift-off event). The ghost selection **528-2** may include a ghost start-point object **526-2** and a ghost end-point object **530-2**. Both the ghost start point object **526-2** and the ghost end-point object **530-2** may have different appearances from the start point object **526-1** and the end-point object **530-1**. On release of the single-finger drag, the selection moves to the location of the ghost selection **528-2**. At release of the contacts, the device **100** ceases the display of the ghost selection **528-2** along with the ghost markers **526-2** and **530-2** as shown in FIG. **5**AU. In FIG. **5**AU, the selection **528-3** is indicated by markers, such as a start-point object **526-3** and an end-point object **530-3**. Other suitable mechanisms for displaying the movement of the selection are described above.

Referring back to FIG. **4**B, if the device **100** determine (at **480**) that the single-finger touch input is tap±half±drag, the device **100** selects a word closest to the touch input and expands the selection while dragging at **471**. As used herein, a tap±half±drag gesture is a gesture that includes an initial touch input followed immediately (e.g., within a predefined time period such as 0.3-0.5 seconds) by an additional touch input on the touch screen display that subsequently moves on the touch screen display without breaking contact with the touch screen display. The move is a continuous touch gesture from a first location of the additional touch input on the touch screen display to a second location on the touch screen display.

Still referring to FIG. **4**B, if the device **100** determines (at **480**) that the single-finger touch input is a drag gesture, the device **100** scrolls the content displayed in the content region of the touch screen display **112** in accordance with the direction of the drag at **488**. For example, an upward drag scrolls the content upward, a downward drag scrolls the content downward, a left drag scrolls the content to the left, and likewise, a right drag scrolls the content to the right.

In some embodiments, similar to scrolling in response to a drag gesture, the device **100** scrolls the content displayed in the content region in response to a swipe gesture in accordance with the direction of the swipe. For example, an upward swipe scrolls the content upward, a downward swipe scrolls the content downward, a left swipe scrolls the content to the left, and likewise, a right swipe scrolls the content to the right.

FIGS. **6**D-**6**E illustrate exemplary user interfaces of expanding a selection while dragging in response to a tap±half±drag gesture, in accordance with some embodiments. The user interfaces in these figures illustrate steps **476** and **471** (FIG. **4**B). In FIG. **6**D, the device **100** detects a single-finger touch input **524-1**. Upon detecting the single-finger touch input **524-1**, the device **100** determines that there is an existing selection **528** (e.g., the word "testing"). The selection **528** is marked by markers, such as a start-point object **526** and an end-point object **530** at respective ends of the selection **528**. The device **100** further determines that the single-finger touch input is not located on the existing selection **528** (e.g., on the word "nation"), and dismisses the existing selection **528**. The device **100** then determines that the single-finger touch input is a tap-a-half-and-drag gesture. The dragging part of the tap-a-half-and-drag gesture starts from a first location **524-1** to a second location **524-2** in a direction **532** of the dragging.

In response to the tap±half±drag gesture, the device **100** selects the word closest to the starting location **524-1** (e.g., selecting the word "nation"), then expands the selection to include additional content beyond the selected word in the direction **532** towards the second location **524-2**. The end of the selected portion of the content **530** is increased as the finger contact moves forward through text on the touch screen **112**, as illustrated in FIG. **6**E, while the beginning of the selected portion of the content **526** remains fixed (e.g., the beginning of the word "nation").

In some embodiments, the start-point object **526** and the end-point object **530** are displayed moving while the finger is dragging to indicate the expanding selection **528**. The selection **528** expands one word at a time if the finger drags fast, and expands one character at a time if the finger drags slow. Though not shown in FIGS. **6**D-**6**E, in some embodiments, whenever text is selected, the device **100** displays a command display area adjacent to the selected portion of the content to facilitate editing functions such as cut, copy, paste etc. An exemplary command display area displayed adjacent to a selected portion of the content is shown in FIG. **5**AR and described in greater detail above with respect to FIG. **5**AR.

In some embodiments, as shown in FIG. **6**E, the device **100** displays a content magnifier **552** adjacent to the respective end of the selected content. The content magnifier **552** displays: an expanded portion **588** of the content proximate to the respective end of the selected content, and a boundary marker **554** that denotes a current position of the respective end of the selected content **528**. In some embodiments, the expanded portion **558** of the content displayed by the content magnifier **552** includes selected content adjacent to the respective end (e.g., "ves tha" in FIG. **6**E) and unselected content adjacent to the respective end (e.g., "t that" in FIG. **6**E).

Referring back to FIG. **4**B, in some embodiments, if the device **100** determines the type of single-finger touch input is double-tap, triple-tap, quadruple-tap, or 5th-tap (**480**—double/triple/4th/5th-Tap). In response to recognizing the multi-tap gesture, the device **100** selects a word closest to the touch input in response to a double-tap, and for each successive tap, the device **100** expands the selection with each successive tap at **478**.

For example, in FIG. **6**F, in response to detecting a single-finger double-tap touch input, the device **100** selects a word closest to the double-tap touch input (e.g., the word "and"). As shown in FIG. **6**G, the word "and" is selected and an indication of the selection **528** is displayed and enclosed with a start-point object **526** and an end-point object **530**. In case the single-finger touch input is a triple-tap, quadruple-tap, or 5th-tap, in response to detecting the touch input, the device **100** expands the selection, selects a sentence (e.g., the sentence "any nation so conceived and so" in FIG. **6**H), a paragraph (e.g., the paragraph of "Now we are engaged in a great civil war . . . " in FIG. **6**I), or the content of the electronic document (FIG. **6**J) respectively and the respective selection **528** is displayed with an indication **528** and enclosed with a start-point object **526** and an end-point object **528**.

It should be noted that different from in response to a single-tap gesture described above with respect to FIGS. **6**A-**6**B, in some embodiments, even though the distance between the double-tap and the closest white space is less than a predetermined threshold distance (e.g., in X zone), in response to detecting a double-tap, the device **100** selects the word closest to the double-tap touch input (e.g., the word "and"). Furthermore, different from in response to a single-tap gesture described above with respect to FIGS. **5**AO-**5**AP, in some embodiments, in response to detecting a double-tap located on a white space between two words within the electronic document, the device **100** selects the word following the white space and displays an indication of the selection. Additionally, in some embodiments, when the double-tap is located on the cursor **522**, the device **100** selects the word connected to the cursor and displays an indication of the selection. Exemplary indication of the selection is shown in FIG. **6**G and described above.

In some embodiments, the device **100** can alternatively move the selected content in response to detecting three substantially simultaneous touch inputs, e.g., a three-finger touch input. FIG. **4**C is a flow chart illustrating a method **490** of content movement with three substantially simultaneous touch inputs (e.g., a three-finger touch input), in accordance with some embodiments. The method **490** is performed at a portable multifunction device (e.g., the device **100** in FIG. **1**A) with a touch screen display (e.g., the touch screen display **112** in FIG. **1**A). As described below, the method **490** provides an expedient mechanism for moving the selected content at a portable multifunction device with a touch screen display.

Similar to the illustration in FIGS. **5**AS-**5**AU, in some embodiments, the device **100** first displays content of an electronic document on the touch screen display **112**. In some embodiments, the content comprises text (e.g., plain text, unstructured text, formatted text, or text in a web page). In other embodiments, the content comprises graphics with or without text. Moreover, the content may be editable or read-only. In some embodiments, while displaying the content of the electronic document, the device **100** detects three substantially simultaneous touch inputs (e.g., a three-finger tap) at **492**. The portable multifunction device **100** then determines whether prior to detecting the touch input, there is an existing selection of the content at **494**. If the device **100** detects an existing selection (**494**—Yes), then the device **100** moves the selection at **496** in response to a hold and drag gesture of the three-finger.

It should be noted that the three substantially simultaneous touch inputs can be located anywhere on the touch screen display **112**. For example, a user can touch the touch screen display **112** with three fingers close together or three fingers spread out. Regardless the three touch inputs locations on the touch screen display **112**, the device **100** can detect the three substantially simultaneous touch inputs and perform actions such as moving a selection in response to detecting a drag of the three-fingers following the initial three substantially simultaneous touch inputs.

It should also be noted that different from the single-finger hold and drag of a selection as illustrated in FIGS. **5**AS-**5**AU, in some embodiments, the three substantially simultaneous touch inputs are not necessarily located on the selection. As illustrated in FIGS. **5**AV-**5**AX and described below, the three substantially simultaneous touch inputs can be located outside a selection, on or over a selection, or even on the keyboard.

For example, FIGS. **5**AV-**5**AX illustrate step **496** (FIG. **4**C) of moving a selection in response to the device **100** detecting a hold and drag gesture of the three-finger. In FIG. **5**AV, the device **100** detects a three-finger touch input at a first region **524-1** on the touch screen display **112**. The first region **524-1** can be located anywhere on the touch screen display **112**. As shown in FIG. **5**AV, the three-finger touch input can be located outside a selection **528-1**, which may be marked by markers, such as a start-point object **526-1** and an end-point object **530-1** at respective ends of a partial word "ought". Though not shown in FIG. **5**AV, the three-finger touch input can be partially on or over a location of the selection **528-1**, or even on the keyboard **521**.

In some embodiments, the device **100** further detects the three-finger touch input remains motionless on the touch screen display for a predetermined duration followed by a continuous drag gesture (e.g., start dragging within 0.5 or 0.75 seconds after remaining motionless) from the location of the three-finger touch input in a direction **532** across the touch screen display from the first region **524-1** to a second region **524-2**. In other embodiments, a delay (e.g., the predetermined duration, is not required for moving the selection.

In response to detecting the continuous touch movement, the device **100** moves the selection **528-1** across document **500** to a new location **528-2** as shown in FIG. **5**AX following the continuous movement.

As mentioned above, in some embodiments, instead of moving the selection **528-1**, a ghost selection **528** is displayed in response to the detection of the single-finger dragging. As shown in FIG. **5**AW, in some embodiments, the ghost selection **528-2** is displayed offset from the selection **528-1**, and in some embodiments, the ghost selection **528-2** can have a different appearance to the selection **528-1**. For example, the ghost selection **528-2** can have a different color and/or shade to highlight the ghost selection **528-2** from the color and/or shade used to highlight the selection **528-1**. Further, the ghost markers **526-2** and **530-2** mark the beginning and the ending of the ghost selection block **528** can have different color, size, and/or shape from the markers **526-1** and **528-1**.

In some embodiments, the ghost selection **528-2** appears at location of the current position of the selection **528-1** as soon as the device **100** detects the three-finger dragging, and the start-point object **526-1** and the end-point object **530-1** can be animated to attract the user's attention to the appearance of the ghost selection **528-2**. While dragging, the ghost selection **528-2** moves in the direction of the three-finger movement to indicate the position to where the selection will be moved when the user lifts or releases the contact (e.g., at the lift-off event). The ghost selection **528-2** may include a ghost start-point object **526-2** and a ghost end-point object **530-2**. Both the ghost start point object **526-2** and the ghost end-point object **530-2** may have different appearances from the start point object **526-1** and the end-point object **530-1**. On release of the three-finger drag, the selection moves to the location of the ghost selection **528-2**. At release of the contacts, the device **100** ceases the display of the ghost selection **528-2** along with the ghost markers **526-2** and **530-2** as shown in FIG. **5**AX. In FIG. **5**AX, the selection **528-3** is indicated by markers, such as a start-point object **526-3** and an end-point object **530-3**. Other suitable mechanisms for displaying the movement of the selection are described above.

It should be understood that the particular order in which the operations in FIGS. **4**A-**4**C have been described is merely exemplary and is not intended to indicate that the described order is the only order in which the operations could be performed. One of ordinary skill in the art would

recognize various ways to reorder the operations described herein. For brevity, these details are not repeated here.

In accordance with some embodiments, FIG. **8** shows a functional block diagram of an electronic device **800** configured in accordance with the principles of the invention as described above. The functional blocks of the device may be implemented by hardware, software, or a combination of hardware and software to carry out the principles of the invention. It is understood by persons of skill in the art that the functional blocks described in FIG. **8** may be combined or separated into sub-blocks to implement the principles of the invention as described above. Therefore, the description herein may support any possible combination or separation or further definition of the functional blocks described herein.

In some embodiments, the electronic device **800** includes a display unit **802** configured to display content of an electronic document and a cursor within the electronic document; a touch-sensitive surface unit **804** configured to receive user contacts; and a processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes a detecting unit **810** and a selecting unit **812**.

The processing unit **808** is configured to: detect two substantially simultaneous touch inputs anywhere on the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**); and in response to detecting the two substantially simultaneous touch inputs: select a portion of the content in the document closest to the cursor (e.g., with the selecting unit **812**); and display the portion of the content as selected content (e.g., with the display unit **802**).

In some embodiments, the electronic device **800** includes the display unit **802** configured to display content of an electronic document and a cursor at a current location within the content; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810**, a determining unit **816**, and a moving unit **814**.

The processing unit **808** is configured to: detect two substantially simultaneous touch inputs at a first region on the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**); upon determining that the two substantially simultaneous touch inputs remain in contact with the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**), detect a continuous touch gesture from a location of the two substantially simultaneous touch inputs across the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**) from the first region to a second region; and in response to detecting the continuous touch gesture: move the cursor from the current location to a new location in a direction of the continuous touch gesture (e.g., with the moving unit **814**).

In some embodiments, the electronic device **800** includes the display unit **802** configured to display text and a cursor at a line within the text; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810** and the moving unit **814**.

The processing unit **808** is configured to: detect a two-finger swipe gesture on the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**) in a direction at least partially parallel to the line and towards an edge of the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**); and in response to detecting the two-finger swipe gesture: move the cursor to a distal point of the text (e.g., with the moving unit **814**).

In some embodiments, the electronic device **800** includes the display unit **802** configured to display content of an electronic document and a cursor within the electronic document; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810** and the selecting unit **812**.

The processing unit **808** is configured to: detect a touch input on the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**), wherein the touch input is located on a word within the content; and in response to detecting the touch input: select the word (e.g., with the selecting unit **812**); and display a command display area adjacent to the selected word, wherein the second command display area includes an icon for cutting the selected word, an icon for copying the selected word, and an icon for pasting a previously selected content.

In some embodiments, the electronic device **800** includes the display unit **802** configured to display content of an electronic document and a selection of the content within the electronic document; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810**, the determining unit **816**, and the moving unit **814**.

The processing unit **808** is configured to: detect a single touch input on the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**) at a location over the selection; in response to detecting the single touch input at the location, display a set of options related to the selection (e.g., with the display unit **802**); determine if the single touch input remains at the location for a predetermined amount of time followed by a continuous touch gesture away from the location on the touch-sensitive surface unit **804** (e.g., with the determining unit **816**); and in response to detecting the single touch input remaining at the location for the predetermined amount of time followed by the continuous touch gesture away from the location, move the selection to a different location in a direction of the continuous touch gesture (e.g., with the moving unit **814**).

In some embodiments, the electronic device **800** includes the display unit **802** configured to display content of an electronic document and a selection of the content within the electronic document; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810**, the determining unit **816**, and the moving unit **814**.

The processing unit **808** is configured to: detect three substantially simultaneous touch inputs at locations anywhere on the touch-sensitive surface unit **804** (e.g., with the detecting unit **810**); determine if the three substantially simultaneous touch inputs is followed by three continuous touch gestures away from the locations on the touch-sensitive surface unit **804** (e.g., with the determining unit **816**); and in response to detecting the three continuous touch gestures, move the selection to a different location in a direction of the continuous touch gestures (e.g., with the moving unit **814**).

In some embodiments, the electronic device **800** includes the display unit **802** configured to display content of an

electronic document, the content includes at least one line of text comprising at least two words; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810**, the determining unit **816**, and the selecting unit **812**.

The processing unit **808** is configured to: detect a touch input on the content (e.g., with the detecting unit **810**); and in response to detecting the touch input: determine a distance of the touch input to a closest space between the two words within the electronic document (e.g., with the determining unit **816**); and in accordance with a determination that the distance is greater than a predetermined threshold distance, select a word within the electronic document closest to the touch input and display the selection (e.g., with the display unit **802**).

In some embodiments, the electronic device **800** includes the display unit **802** configured to display content of an electronic document and a soft keyboard in focus; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810** and the changing appearance unit **818**.

The processing unit **808** is configured to: detect two substantially simultaneous touch inputs on the soft keyboard (e.g., with the detecting unit **810**); and in response to detecting the two substantially simultaneous touch inputs on the soft keyboard, blur the soft keyboard (e.g., with the changing appearance unit **818**).

In some embodiments, the electronic device **800** includes the display unit **802** configured to display content of an electronic document and a cursor within the electronic document; the touch-sensitive surface unit **804** configured to receive user contacts; and the processing unit **808** coupled to the display unit **802** and the touch-sensitive surface unit **804**. In some embodiments, the processing unit **808** includes the detecting unit **810** and the changing appearance unit **818**.

The processing unit **808** is configured to: display, on the touch-sensitive surface display unit **802**, a soft keyboard having multiple keys each having a respective alphanumeric character of a plurality of alphanumeric characters; detect two substantially simultaneous touch inputs on the soft keyboard (e.g., with the detecting unit **810**); and in response to detecting the two substantially simultaneous touch inputs on the soft keyboard, change the appearance of the soft keyboard to a changed appearance (e.g., with the changing appearance unit **818**).

Turning to FIGS. **9**A-**9**AD, these figures illustrate exemplary user interfaces for selecting content, moving a text selection indicator, and changing keyboard appearance based on contact intensity (e.g., pressure), in accordance with some embodiments. The user interfaces in these figures are used to illustrate the processes described below with respect to FIGS. **10**A-**10**G and **11**A-**11**F. FIGS. **9**B-**9**AD include intensity versus time diagrams that show the current intensity of the contact on the touch-sensitive surface relative to a plurality of intensity thresholds (e.g., "IT_D", "IT_L", and "IT_0").

FIGS. **9**A-**9**N illustrate exemplary user interfaces for selecting content in a text selection mode in response to a deep press on an onscreen keyboard in accordance with some embodiments. The user interfaces in these figures are used to illustrate the processes described below with respect to FIGS. **10**A-**10**G.

In FIG. **9**A, editable content **900** is displayed in a content presentation region **902** while an application is in a document editing mode. The application runs on a device **100** that has one or more sensors (e.g., contact intensity sensor(s) **259**, FIG. **2**B) to detect intensity of contacts with the touch-sensitive display. In the document editing mode, an onscreen keyboard **921** is displayed for text inputs. A user may enter text by touch inputs (e.g., by contact) on the onscreen keyboard **921** and confirm completion of the editing by performing another touch input (e.g., a tap on "done" button) to exit the editing mode. An insertion marker (e.g., cursor **922**) is displayed to indicate a current location for text inputs.

In FIG. **9**B, at time T_1, while in the editing mode and displaying the keyboard **921**, the device detects a deep press by a finger contact **924** on the onscreen keyboard **921**, such that the intensity of the press input has increased above the deep press intensity threshold IT_D. In response to detecting the deep press, the appearance of the keyboard **921** changes to indicate that the application has entered a text selection mode. In the text selection mode, the keyboard **921** is not responsive to keystrokes, but rather serves as an onscreen touchpad or track pad for moving the cursor. As shown in FIG. **9**B, in some embodiments, the keys are visually obscured. Visually obscuring keys on the keyboard **921** provides an intuitive indication that the function of the keyboard **921** has changed. In some embodiments, the onscreen keyboard **921** shown in FIG. **9**B is dimmed or blurred relative to the keyboard **921** shown in FIG. **9**A prior to detecting the deep press, such that the keys are no longer visible or clearly displayed as before. In some embodiments, the keyboard **921** becomes semitransparent, to reveal content lying underneath the keyboard.

When the keyboard **921** serves as an onscreen touch pad or track pad, in response to detecting finger movement **932** on the keyboard **921**, in some embodiments, a floating cursor **922-1** moves across the touch screen display **112** in accordance with the movement of one or more finger contacts, and a ghost cursor **922-2** is displayed offset from the real cursor **922-1**. In some embodiments, the ghost cursor **922-2** indicates where the cursor will be located after a lift-off of the finger contact **924**. In some embodiments, the ghost cursor **922-2** is a modified version of the original cursor **922** displayed on the screen (e.g., the ghost cursor **922-2** is in grey color, while the original cursor **922** as shown in FIG. **9**A is in black color).

In some embodiments, when the touch input for entering the text selection mode is detected, the original cursor **922** changes its appearance, while the floating cursor **922-1** springs into its initial location from the original text cursor **922**. In some embodiment, the initial location of the floating cursor **922-1** is slightly offset from the location of the ghost cursor **922-2** (e.g., slightly higher in FIG. **9**B). In some embodiments, the animation displayed in response to the touch input has the visual effect that the original text cursor **922** has jumped off the page and becomes a floating cursor **922-1**, while leaving a shadow or ghost image at its original location. For example, the ghost cursor **922-2** shown in FIG. **9**B is in the middle of the word "Liberty", the same location as the cursor **922** in FIG. **9**A when the touch input by finger contact **924** is determined to satisfy the one or more criteria for entering the text selection mode at time T_1.

In some embodiments, when the user subsequently moves the finger contact, the floating cursor **922-1** moves with the finger contact **924** in a continuous fluid motion in the content presentation region **902**, while the ghost cursor **922-2** moves in discrete jumps from one permitted insertion location to

another permitted insertion location to indicate the final location of the cursor if the touch input was terminated at that moment. For example, in FIG. **9**C, when the finger moves **932** along a path, the floating cursor **922-1** moves along a similar path, while the ghost cursor **922-2** moves in the direction of the finger movement and in discrete jumps from the middle of the word "Liberty" (FIG. **9**B) to the end of the word "conceived" (FIG. **9**C), then to the middle of the word "created" (FIG. **9**D). The ghost cursor **922-2** indicates the position where a cursor will be displayed when the user lifts the finger. As shown in FIGS. **9**C and **9**D, after the initial deep press at time T_1, the intensity of the contact **924** on the touch screen **112** can be above or below the deep press intensity threshold IT_D during the finger movement between time T_1 and T_3.

In FIG. **9**E, at the end of the finger movement **932**, the contact intensity decreases to zero at time T_4, which corresponds to a lift-off of the finger. In response to the lift-off, in some embodiments, the device ceases to display the floating cursor, maintains display of the ghost cursor at a respective permitted insertion position reached by the ghost cursor after the discrete movements of the ghost cursor (e.g., in the middle of the word "created"). As shown in FIG. **9**E, in some embodiments, the device ceases to display the ghost cursor, displays the cursor **922** in the middle of the word "created", and restores the appearance of the onscreen keyboard **921** (e.g., no longer obscured) to indicate the end of the text selection mode and that the onscreen keyboard **921** is responsive to keystrokes.

In FIG. **9**F, while in the text selection mode, at time T_4, when a ghost cursor (not shown in FIG. **9**F) is located in the middle of the word "created", the device detects the intensity of the press input exceed the deep press intensity threshold IT_D. In response to detecting the deep press on the editable content **900**, the device begins to select a portion of the text input **928** in accordance with the movement **932** of the contact in the touch input. After time T_4, during the movement **932**, the intensity of the press input can be above or below the deep press intensity threshold Ill).

FIGS. **9**G-**9**L illustrate a variety of possible behaviors that can occur at time T_5 in accordance with some embodiments.

In FIG. **9**G, at time T_5, the device detects lift-off of the contact in the touch input, such that the intensity of the press input is zero. In response to detecting the lift-off of the contact in the touch input, in some embodiments, the device confirms selection of the portion of the text input **928**. In some embodiments, a selection box **930** (e.g., a grey box) is maintained on the selected portion of the text input, and/or a menu bar **940** is displayed that shows actions that can be performed on the selected portion of the text input (e.g., copying **944**, defining, cutting **942**, pasting, etc.). Thus, FIGS. **9**F and **9**G illustrate using a first deep press input by a contact (**924**) to initiate text selection, then movement of the contact to select text, and then lift-off of the contact to confirm the selection.

In FIG. **9**H, after selecting the portion of the text input between time T_4 and T_5, while the portion of the text input is selected (FIG. **9**F), the device detects an intensity of the contact in the touch input that exceeds the deep press intensity threshold IT_D at time T_5. In response to detecting the deep press while the portion of the text input is selected, in some embodiments, the device clears selection of the portion of the text input and displays the insertion marker **922**, as shown in FIG. **9**H. Thus, FIGS. **9**F and **9**H illustrate using a first deep press input by a contact (**924**) to initiate text selection, then movement of the contact to select text, and then a second deep press input by the contact to clear the selection.

In FIG. **9**I, instead of clearing the selection as shown in FIG. **9**H, upon detecting the deep press at time T_5, while the portion of the text input is selected (FIG. **9**F), the device detects an intensity of the contact in the touch input that exceeds the deep press intensity threshold IT_D followed by lift-off of the contact without further movement of the contact. In response to detecting the stationary deep press followed by the lift-off, the device confirms the selection **928**, and in some embodiments, displays a menu bar **940**. Thus, FIGS. **9**F and **9**I illustrate using a first deep press input by a contact (**924**) to initiate text selection, then movement of the contact to select text, and then a second deep press input by the contact and lift-off without further movement of the contact to confirm the selection.

In FIG. **9**J, upon detecting the deep press at time T_5, while the portion of the text input is selected (FIG. **9**F), the device detects an intensity of the contact in the touch input that exceeds the deep press intensity threshold IT_D followed by further movement **932** of the contact. In response to the movement following the deep press, the device clears the selection and displays the insertion marker **922** at the end of the word "created". After clearing the selection at time T_5, a new selection **928** is made in accordance with the finger movement **932** between time T_5 and T_6, as shown in FIG. **9**K. The new selection **928** starts from the end of the word "created", where the insertion marker **922** was located when a deep press was detected at time T_5. Thus, FIGS. **9**F, **9**J, and **9**K illustrate using a first deep press input by a contact (**924**) to initiate text selection, then movement of the contact to select text, then a second deep press input by the contact to confirm the selection, and then further movement of the contact to clear the prior selection and start a new selection.

In FIG. **9**L, upon detecting the deep press at time T_5, while the portion of the text input is selected (FIG. **9**F), the device detects an intensity of the contact in the touch input that exceeds the deep press intensity threshold IT_D followed by further movement **932** of the contact. In response to the movement following the deep press, the device moves the floating cursor **922-1** and the ghost cursor **922-2** within the content presentation region **902** in accordance with the further movement **932** of the contact. Thus, FIGS. **9**F and **9**L illustrate using a first deep press input by a contact (**924**) to initiate text selection, then movement of the contact to select text, then a second deep press input by the contact to confirm the selection, and then further movement of the contact to clear the prior selection and move the cursor(s), without starting a new selection.

In FIG. **9**M, while in the text selection mode after detecting a deep press at time T_1, the device detects a first local intensity peak of the touch input at time T_4 followed by a second local intensity peak in the touch input at time T_5 that both exceed the deep press intensity threshold IT_D. In response, the device selects a predetermined unit (e.g., a word, or a phrase, or a sentence) of the text input according to a current location of the ghost cursor. For example, at time T_3, the ghost cursor **922-2** is located in the middle of the word "created" (FIG. **9**D). In response to detecting two local intensity peak exceeding the deep press intensity threshold IT_D at time T_4 and T_5 respectively, the device selects the word "created" according to the current location of the ghost cursor located in the middle of the word.

In some embodiments, as shown in FIG. **9**M, the device detects an increase in a characteristic intensity of the contact above the predefined threshold (e.g., IT_D) followed by a

decrease in the characteristic intensity of the contact below the predefined intensity threshold (e.g., IT_D, and, optionally, a hysteresis intensity threshold that is below the predefined intensity threshold), which in turn is followed by another increase in the characteristic intensity of the contact above the predefined intensity threshold (e.g., IT_D).

In some embodiments, the criteria for selecting the first predetermined unit of the text includes a criterion that is met when the second increase in characteristic intensity of the contact above the predefined intensity threshold (e.g., IT_D) occurs within a predetermined time period after the first increase in characteristic intensity of the contact above the predefined intensity threshold (e.g., IT_D, the double press is a quick double press to trigger selection of the first predetermined unit of text input). For example, when the duration between time T_4 and T_5 is less than a threshold, the criteria for selecting the first predetermined unit of text are met.

In some embodiments, instead of just two increases in the characteristic intensity of the contact above the predefined intensity threshold (e.g., IT_D), three such increases are detected and used to trigger selection of a second predetermined unit of text input (e.g., a quick triple press triggers selection of a sentence, whereas a quick double press triggers selection of a word).

In FIG. **9**N, after detecting the first local intensity peak followed by the second local intensity peak, the device detects a third consecutive local intensity peak in the touch input that exceeds the predetermined intensity threshold (e.g., IT_D). In some embodiments, the three consecutive local intensity peaks at time T_4, T_5, and T_6 are spaced within a predetermined duration (e.g., within 100 ms or within 200 ms) such that the three intensity peaks are recognized as a single user command (e.g., a triple deep press). In response to detecting the triple deep press, the device selects a second predetermined unit (e.g., a sentence "Four score . . . equal.") of the text input that is larger than and includes the first predetermined unit (e.g., the word "created" in FIG. **9**M) of the text input.

Turning to FIGS. **9**O-**9**AD, FIGS. **9**O-**9**AD illustrate exemplary user interfaces for selecting content. The user interfaces in these figures are used to illustrate the processes described below with respect to FIGS. **11**A-**11**F.

In FIG. **9**O, editable content **900** is displayed while an application is in a document editing mode. The application runs on a device **100** that has one or more sensors (e.g., contact intensity sensor(s) **259**, FIG. **2**B) to detect intensity of contacts with the touch-sensitive display. A user may edit text (e.g., via a keyboard, not shown) and confirm completion of the editing by performing a touch input (e.g., a tap on "done" button) to exit the editing mode. An insertion marker (e.g., cursor **922**) is displayed to indicate a current location for text inputs.

At a time prior to T_0, no contact is present or detected on touch screen display **112**. At T_0, the device detects the intensity of the press input increases above the contact intensity threshold IT_0. In response to detecting the finger contact **925** on the editable content **900**, the device moves a text selection indicator (e.g., a cursor **922**) to the location that corresponds to the finger contact (e.g., between the character "r" and "o" of the word "from").

In FIG. **9**P, in some embodiments, after the intensity of the press input increases above the contact intensity threshold IT_0 at T_0, the finger press maintains its pressure, which corresponds to a press and hold gesture. In response to detecting the press and hold gesture, the device displays a magnifying loupe **908**. In the magnifying loupe **908**, the device expands a portion **943** of the editable content on the touch screen display to a second magnification that is greater than the first magnification. The content magnifier **908** displays the expanded portion **943** of the editable content and a position marker **945** (which corresponds to cursor **922**, and which may be displayed in addition to cursor **922** or in place of cursor **922**) at a first location within the expanded portion of the editable content (e.g., in the middle of the word "from"). In some embodiments, the expanded portion **943** of the editable content displayed in the content magnifier includes portions of at least three horizontal lines of text displayed concurrently. In some embodiments, the content magnifier **908** has a predefined shape (e.g., a circle).

In FIG. **9**Q, in some embodiments, after the intensity of the press input increases above the contact intensity threshold IT_0 at T_0, the intensity of the finger press further increases. At time T_1, the device detects that the intensity of the press input has increased above the deep press intensity threshold IT_D. In some embodiments, in response to detecting the deep press on the editable content **900**, the device displays the content magnifier **908**.

In FIG. **9**P or FIG. **9**Q, when the device detects movement **932** of the finger contact **925** across the touch screen display, the device moves the content magnifier **908** and the insertion marker **922** (and/or position marker **945**) in accordance with the movement of the finger contact **925**. In FIG. **9**R, in response to detecting the movement **932** of the finger gesture from the middle of the word "from" at T_1 to the middle of the word "nation" at T_2, the device moves the content magnifier **908** and the insertion marker **922** in accordance with the movement of the finger. During the finger movement **932**, the intensity of the press input can increase or decrease. For example, as shown in FIG. **9**R, after time T_1, the intensity continues to rise above the deep press intensity threshold IT_D then decreases to dip below the deep press intensity threshold IT_D at time T_2. The device continues to move the content magnifier **908** and the insertion marker **922** until the device detects the intensity of the press input has once again increased above the deep press intensity threshold IT_D at time T_3, as shown in FIG. **9**S.

In FIG. **9**S, at time T_3, the device detects a deep press followed by movement of contact **925**. In response to detecting the deep press followed by movement of contact **925**, the device selects editable text (e.g., one character at a time) as the finger contact **925** moves. In some embodiments, the selected content **928** is marked by a start-point object **926** and an end-point object **930** at respective ends of the selected content **928**. For example, in response to detecting the movement **932** of the finger contact **925** from the middle of the word "nation" to the middle of the word "under", the device selects the editable content as the finger moves and marks the selection **928** by the start-point object **926** in the middle of the word "nation" and the end-point object **930** in the middle of the word "under".

In the corresponding intensity diagram, the movement of the finger from the middle of the word "nation" to the middle of the word "under" corresponds to the segment between time T_3 and T_4. As shown in FIG. **9**S, once the initial deep press is detected, the intensity of the press input does not need to be constantly above the deep press intensity threshold IT_D. Even when the intensity of the press input has fallen below IT_D during part of the finger movement, the content selection continues.

FIGS. **9**T-**9**X illustrate a variety of possible behaviors that can occur at time T_5 in accordance with some embodiments.

In FIG. **9**T, at the end of the content selection, in some embodiments, the device detects lift-off of the finger contact at time T_5 such that the device detects the intensity of the

finger contact **925** decreases to zero. In response to detecting the lift-off, the device maintains the selection **928** and displays an action menu **940** adjacent to the selected content **928**. In some embodiments, the action menu **940** includes an icon **942** for cutting the selected content **928**, an icon **944** for copying the selected content **928**, and an icon **946** for looking up the selected content **928**. Thus, FIGS. **9**S and **9**T illustrate using a first deep press input by a contact (**925**) to initiate text selection, then movement of the contact to select text, and then lift-off of the contact to confirm the selection.

In FIG. **9**U, at the end of the content selection, in some embodiments, the device detects another deep press by finger contact **925** at time T_5. In response to detecting the deep press, the device cancels the selection, and places the text selection indicator (e.g., cursor **922**) at the deep press location (e.g., in the middle of the word "under"), and starts a new selection upon detecting further finger movement. Thus, FIGS. **9**S and **9**U illustrate using a first deep press input by a contact (**925**) to initiate text selection, then movement of the contact to select text, and then a second deep press input by the contact to clear the selection.

In FIG. **9**V, in some embodiments, instead of canceling the selection upon detecting another deep press by finger contact **925**, at time T_5, in response to detecting the deep press, the device maintains the selection **928**. Subsequently, in some embodiments, as shown in FIG. **9**W, the device detects finger movement **932** between time T_5 and T_6. In response to detecting the finger movement **932**, the selection is cleared, and the text selection indicator (e.g., cursor **922**) moves from the middle of the word "under" to the middle of the word "of" in accordance with the movement **932** of the finger. Thus, FIGS. **9**S, **9**V, and **9**W illustrate using a first deep press input by a contact (**925**) to initiate text selection, then movement of the contact to select text, then a second deep press input by the contact to confirm the selection, and then further movement of the contact to clear the prior selection and move the cursor(s), without starting a new selection.

FIG. **9**X illustrates, in some embodiments, both cursor positioning and text selection occur in the text selection mode. After detecting the deep press at time T_5, in response to detecting further finger movement **932** between time T_5 and T_6, the device maintains the selection **928** and displays an action menu **940** adjacent to the selected content **928**. In addition, the device displays the text selection indicator (e.g., cursor **922**) that moves in accordance with movement **932** of the finger. The device will clear the selection **928** upon detecting another deep press. Thus, FIGS. **9**S and **9**X illustrate using a first deep press input by a contact (**925**) to initiate text selection, then movement of the contact to select text, then a second deep press input by the contact to confirm and complete the selection, and then further movement of the contact to move the cursor(s) and maintain the action menu **940**, without clearing the selected content.

In some embodiments, if a third deep press input by the contact **925** is detected after the further movement of the contact to move the cursor(s), then the selected content (e.g., "ation un" in FIG. **9**X) is cleared and display of the action menu **940** ends. In some embodiments, the third deep press input by the contact initiates text selection such that movement of the contact **925** after the third deep press input selects text in accordance with the movement of the contact **925**.

In some embodiments, the third deep press input does not clear the previously selected content, but the third deep press input by the contact does initiate additional text selection such that movement of the contact **925** after the third deep press input selects an additional portion of text in accordance with the movement. In these embodiments, a user is able to select multiple portions of content with a single continuous contact by repeatedly: deep pressing to initiate text selection, moving to select text, deep pressing again to complete text selection, and moving without selecting text to a next position on the touch-sensitive surface that corresponds to a desired starting location for the next text selection.

On the other hand, if lift off of contact **925** is detected without detecting a third deep press input by contact **925**, then display of the selected content "ation un" and the action menu **940** are maintained.

In some embodiments, in FIG. **9**X, the selected text "ation un" is copied by moving contact **925** across the touch-sensitive surface to a position that corresponds to the location of copy icon **944**, and then detecting a deep press with contact **925** at that position. Similarly, in FIG. **9**X, the selected text "ation un" is cut by moving contact **925** across the touch-sensitive surface to a position that corresponds to the location of cut icon **942**, and then detecting a deep press with contact **925** at that position. Similarly, in FIG. **9**X, the selected text "ation un" is looked up by moving contact **925** across the touch-sensitive surface to a position that corresponds to the location of lookup icon **946**, and then detecting a deep press with contact **925** at that position. Alternatively, while action menu **940** is displayed, a tap gesture on the touch-sensitive surface at a location that corresponds to the location of one of icons **942**, **944**, and **946** in the action menu **940** initiates the corresponding action. In some embodiments, a deep press input (e.g., an increase in intensity from below IT_D to above IT_D) by contact **925** on text (e.g., a word, set of words or characters, hyperlink, or other portion of text) while the text is selected initiates a predefined user interface action associated with the selected text. In some embodiments, the predefined user interface action includes displaying additional information about the selected text (e.g., displaying a region displayed overlaid on the user interface that includes the text, wherein the overlaid region includes additional information about the text such as a definition for a word, an encyclopedia entry for a word or phrase, or a preview of a linked resource such as a webpage for a hyperlink). In some embodiments, the additional information continues to be displayed overlaid on the user interface that includes the text until contact **925** ceases to be detected, and the device ceases to display the additional information in response to ceasing to detect contact **925**. In some embodiments, the additional information for the selected text continues to be displayed overlaid on the user interface that includes the text until another deep press (e.g., an increase in intensity from below IT_D to above IT_D) by contact **925** is detected on the selected text, and the device ceases to display the additional information in response to detecting a deep press (e.g., an increase in intensity from below IT_D to above IT_D) by contact **925** on the selected text while the additional information for the selected text is displayed.

Turning to FIGS. **9**Y-**9**AD, FIGS. **9**Y-**9**AD illustrate exemplary user interfaces for selecting read-only content (e.g., a webpage) on a device **100** that has one or more sensors (e.g., contact intensity sensor(s) **259**, FIG. **2**B) to detect intensity of contacts with the touch-sensitive display. In FIG. **9**Y, prior to time T_0, no contact is present or detected on the touch screen **112**. At T_0, the device detects the intensity of a press input by finger contact **927** increases above the contact intensity threshold IT_0.

In FIG. **9**Z, at time T_1, the device detects that the intensity of the press input by finger contact **927** has increased above the deep press intensity threshold IT_D. In response to detecting the deep press on the read-only content, the device displays a selection box **929** around a word (e.g., "Translation") in the read-only text.

In FIG. **9**AA, at time T_2, the device detects a movement **932** of the finger contact **927** from the word "Translation" to "Gift" in the read-only content. In accordance with the movement of the finger contact **927**, additional words are selected, and the selection box **929** expands to "Translation: A U.S. Gift". In some embodiments, the expansion increases one word at a time.

In FIG. **9**AB, at time T_3, the device detects that the intensity of the press input by finger contact **927** has increased above the deep press intensity threshold IT_D. In response to detecting the deep press, the device clears the selection, and starts a new selection by selecting a word at the deep press location of finger contact **927** (e.g., the word "Gift") as shown in FIG. **9**AB and increases the new selection box **929** one word at a time in accordance with the movement **932** of the finger contact **927**, as shown in FIG. **9**AC.

In FIG. **9**AD, at the end of the content selection, in some embodiments, the device detects a lift-off of the finger contact **927**, such that the intensity of the press input has decreased to zero. In response to detecting the lift-off, the device maintains the selection and displays an action menu **940** adjacent to the selected content in selection box **929**. The action menu **940**, in some embodiments, includes an icon for copying the selected content.

FIGS. **10**A-**10**G illustrate a flow diagram of a method **1000** of manipulating a cursor in accordance with some embodiments. The method **1000** is performed at (**1002**) an electronic device (e.g., portable multifunction device **100**, FIG. **1**A) with one or more processors, memory, and a display. In some embodiments, the display is a touch-screen display and the touch-sensitive surface is on or integrated with the display. In some embodiments, the display is separate from the touch-sensitive surface. Some operations in method **1000** are, optionally, combined and/or the order of some operations is, optionally, changed.

As described below, the method **1000** provides an efficient way to manipulate a cursor. The method reduces the cognitive burden on a user when using a cursor, thereby creating a more efficient human-machine interface. For battery-operated electronic devices, enabling a user to manipulate a cursor faster and more efficiently conserves power and increases the time between battery charges.

The device concurrently displays (**1004**) an onscreen keyboard (e.g., keyboard **921**, FIG. **9**A) and a content presentation region **902** on the touch-sensitive display. In some embodiments, the content presentation region displays (**1006**) text input received from the onscreen keyboard. The device then detects (**1008**) a touch input (e.g., by finger contact **924**) on the onscreen keyboard **921** displayed on the touch-sensitive display. In response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display, the device determines (**1010**) whether the touch input satisfies one or more criteria for entering a text selection mode.

In some embodiments, the one or more criteria for entering the text selection mode include (**1012**) the touch input including a two-finger drag gesture over the onscreen keyboard (FIG. **7**B). In some embodiments, a two-finger drag gesture that starts outside of the onscreen keyboard and enters the onscreen keyboard through movement of the finger contacts satisfies the criteria for entering the text selection mode (FIGS. **7**A and **7**B). In some embodiments, after entering the onscreen keyboard, as long as the two-finger gesture is confined within the onscreen keyboard, the criteria for entering the text selection mode are satisfied.

In accordance with a determination that the touch input satisfies the one or more criteria for entering the text selection mode, the device concurrently displays (**1014**), in the content presentation region **902**, a first cursor (e.g., ghost cursor **922-2**, FIG. **9**B) at a first location and a second cursor (e.g., floating cursor **922-1**, FIG. **9**B) at a second location that is different from the first location. In some embodiments, the second cursor **922-1** is a cursor that moves across the touch-sensitive display in accordance with the movement of one or more finger contacts in the touch input (FIGS. **9**C-**9**E). In some embodiments, the first cursor **922-2** is a ghost cursor that indicates where the cursor will be located after the lift-off of the finger contact (FIGS. **9**C-**9**E).

In some embodiments, the electronic device has (**1016**) one or more sensors to detect intensity of contacts with the touch-sensitive display, the touch input on the touch-sensitive display includes an input by a contact on the onscreen keyboard, and the one or more criteria for entering the text selection mode include the contact on the onscreen keyboard having an intensity that exceeds a predetermined deep press intensity threshold (FIG. **9**B). In some embodiments, determining whether the touch input satisfies the one or more criteria for entering the text selection mode includes determining whether the touch input on the touch-sensitive display includes a press input by finger contact **924** over the onscreen keyboard **921**, and the press input by finger contact **924** has a contact intensity that exceeds a predetermined deep press intensity threshold IT_D (FIG. **9**B).

In some embodiments, in accordance with the determination that the touch input satisfies the one or more criteria for entering the text selection mode, the device visually obscures (**1018**) keys on the onscreen keyboard (FIG. **9**B). In some embodiments, visually obscuring the keys on the onscreen keyboard includes (**1020**) applying a blurring effect to the onscreen keyboard (FIG. **9**B). As shown in FIG. **9**B, by applying a blurring effect to the keyboard, the keys on the keyboard become fuzzy and indiscernible. In some embodiments, visually obscuring the keys on the onscreen keyboard includes (**1022**) transforming the onscreen keyboard into an onscreen touchpad (FIGS. **9**B-**9**D). In some embodiments, visually obscuring the keys on the onscreen keyboard includes (**1024**) making the onscreen keyboard semitransparent to partially reveal content lying underneath the onscreen keyboard (FIGS. **9**B-**9**D).

In some embodiments, the second location **922-1** (FIG. **9**B) is (**1026**) based on a location of an initial contact in the touch input, and the first location is a permitted insertion position in the content presentation region that is based on the second location. In some embodiments, the initial location of a finger contact **924** on the touch screen display **112** determines the initial position of the second cursor. For example, if the initial location of the finger contact is on the left portion of the touch screen display **112**, the second cursor **922-1** will be displayed at a corresponding location on the left portion of the content presentation region (FIG. **9**L). Conversely, as shown in FIG. **9**B, when the initial location of the finger contact **924** is on the right portion of the touch screen display **112**, the second cursor **922-1** will be displayed at a corresponding location on the right portion of the content presentation region **902** (FIG. **9**B).

In some embodiments, once the initial position of the second cursor (e.g., floating cursor **922-1**, FIG. **9**B) is

determined based on the initial position of the finger contact, the initial position of the first cursor (e.g., ghost cursor **922-2**, FIG. **9**B) is determined based on the initial position of the second cursor. In some embodiments, the original text cursor (e.g., cursor **922**, FIG. **9**A) jumps to the position of the second cursor (e.g., floating cursor **922-1**, FIG. **9**B) to serve as the second cursor, and the first cursor (e.g., ghost cursor **922-2**, FIG. **9**B) is created at the corresponding insertion position (e.g., the position in the middle of the word "Liberty" marked by the insertion marker **922** in FIG. **9**A) that is associated with the second cursor.

In some embodiments, as shown in FIG. **9**B, the first location is (**1028**) an insertion position at which the first cursor **922-2** is located when the touch input is determined to satisfy the one or more criteria for entering the text selection mode, and the second location is displaced from the first location by a predetermined offset. For example, the insertion marker **922** is displayed in the text input (e.g., in the middle of the word "Liberty, FIG. **9**A) when the touch input is determined to satisfy the one or more criteria for entering the text selection mode (FIG. **9**B). When it is determined that the touch input satisfies the one or more criteria for entering the text selection mode, the first cursor (e.g., ghost cursor **922-2**) is displayed at the position of the insertion marker (e.g., in the middle of the word "Liberty, FIG. **9**B), and a second cursor (e.g., floating cursor **922-1**) is created and placed near the first cursor. When the user subsequently moves the finger contact in the touch input, the floating cursor is dragged by the finger contact, and the first cursor moves from permitted insertion location to permitted insertion location in accordance with the current position of the floating cursor. In some embodiments, when the touch input is determined to satisfy the one or more criteria for entering the text selection mode, an animation is displayed that shows the floating cursor **922-1** being peeled off the first cursor **922-2**, and floating above the first cursor **922-2** at a predetermined distance, and the first cursor **922-1** takes on an appearance (e.g., grayed) that mimics a shadow or ghost of the floating cursor **922-1**.

In some embodiments, one of the first and second cursors is (**1030**) already displayed in the content presentation region **902** before both of the first and second cursors are concurrently displayed in the content presentation region **902**. In some embodiments, the floating cursor **922-1** is already displayed when the touch input is determined to satisfy the one or more criteria for entering the text selection mode. In some embodiments, the insertion cursor **922-2** is already displayed when the touch input is determined to satisfy the one or more criteria for entering the text selection mode.

In some embodiments, the device detects (**1032**) movement of one or more contacts of the touch input, and moves (**1034**) the second cursor (e.g., the floating cursor **922-1**) within the content presentation region in accordance with the movement of the one or more contacts of the touch input (e.g., the movement of the floating cursor smoothly follows the movement of a finger contact in terms of speed and direction). In some embodiments, the device moves (**1036**) the first cursor based on the movement of the second cursor, and movement of the first cursor includes discrete movements between permitted insertion positions in the content presentation region. For example, when the user moves the finger contact in the touch input (FIGS. **9**B-**9**D), the floating cursor **922-1** is dragged by the finger contact, and the first cursor (e.g., ghost cursor **922-2**) moves from permitted insertion location to permitted insertion location in accordance with the current position of the floating cursor **922-1** (e.g., from the middle of the word "Liberty in FIG. **9**B to the end of the word "conceived" in FIG. **9**C", then to the middle of the word "created" in FIG. **9**D).

In some embodiments, the device detects (**1038**) a lift-off of the touch input after detecting the movement of the one or more contacts of the touch input (FIG. **9**E). In response to detecting the lift-off of the touch input, the device ceases (**1040**) to display the second cursor.

In some embodiments, in response to detecting the lift-off of the touch input, the device maintains (**1042**) display of the first cursor at a respective permitted insertion position reached by the first cursor after the discrete movements of the first cursor (e.g., the middle of the word "created" in FIG. **9**D).

In some embodiments, in response to detecting the lift-off of the touch input, the device ceases (**1044**) to display the first cursor (FIG. **9**E).

In some embodiments, the onscreen keyboard is obscured in accordance with a determination that the touch input satisfies the one or more criteria for entering the text selection mode, and in response to detecting the lift-off of the touch input, the device restores (**1046**) display of the onscreen keyboard (FIG. **9**E).

In some embodiments, the device has (**1048**) one or more sensors to detect intensity of contacts with the touch-sensitive display, and using the one or more sensors, the device detects that an intensity of a contact in the touch input exceeds a predetermined intensity threshold (e.g., IT_D). After detecting that the intensity of the contact in the touch input exceeds the predetermined intensity threshold, the device detects (**1050**) movement of the contact in the touch input. In response to detecting the movement of the contact in the touch input, after detecting that the intensity of the contact in the touch input exceeds the predetermined intensity threshold, the device selects (**1052**) a portion of the text input in accordance with the movement of the contact in the touch input (e.g., selecting "eated" in accordance with the finger movement **932**, FIG. **9**F). In some embodiments, the selected portion of the text input begins (**1054**) at a position of the first cursor (e.g., between the character "r" and "e" of the word "created", FIG. **9**F), when the detected intensity of the contact in the touch input exceeded the predetermined intensity threshold.

In some embodiments, the device detects (**1056**) lift-off of the contact in the touch input after selecting the portion of the text input in accordance with the movement of the contact in the touch input. In response to detecting the lift-off of the contact in the touch input, the device confirms (**1058**) selection of the portion of the text input (FIG. **9**G).

In some embodiments, after selecting the portion of the text input, while the portion of the text input is selected, the device detects (**1060**) an intensity of the contact in the touch input that exceeds the predetermined threshold (e.g., IT_D). In response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold while the portion of the text input is selected, the device clears (**1062**) selection of the portion of the text input (FIG. **9**H).

In some embodiments, after selecting the portion of the text input, while the portion of the text input is selected, the device detects (**1064**) an intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact. In response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact, the device confirms (**1066**) selection of the portion of the text input (FIG.

9I). In some embodiments, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact: selection of text is stopped, a selection box is maintained on the selected portion of the text input, and/or a menu bar is displayed that shows actions that can be performed on the selected portion of the text input (e.g., copying, defining, cutting, pasting, etc.).

In some embodiments, after selecting the portion of the text input, while the portion of the text input is selected, the device detects (**1068**) an intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by further movement of the contact. In response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact, the device clears (**1070**) selection of the portion of the text input (FIG. **9**J). Further, in some embodiments, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact, the device starts (**1072**) selection of a new portion of the text input in accordance with the further movement of the contact (FIG. **9**K). In some other embodiments, instead of starting a new selection, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact, the device moves (**1074**) the second cursor and the first cursor within the content presentation region in accordance with the further movement of the contact (FIG. **9**L).

In some embodiments, the device has one or more sensors to detect intensity of contacts with the touch-sensitive display, and using the one or more sensors, in the text selection mode, the device detects (**1076**) a first local intensity peak in the touch input followed by a second local intensity peak in the touch input that both exceed a predetermined intensity threshold (e.g., ITS). In response to detecting the first local intensity peak followed by the second local intensity peak that both exceed the predetermined intensity threshold, the device selects (**1078**) a first predetermined unit (e.g., a word as shown in FIG. **9**M, or a phrase, or a sentence as shown in FIG. **9**N) of the text input according to a current location of the first cursor.

In some embodiments, after detecting the first local intensity peak followed by the second local intensity peak, the device detects (**1080**) a third consecutive local intensity peak in the touch input that exceeds the predetermined intensity threshold (e.g., a triple deep press). In response to detecting the three consecutive local intensity peaks in the touch input that all exceed the predetermined deep press intensity threshold, the device selects (**1082**) a second predetermined unit (e.g., a sentence, FIG. **9**N) of the text input that is larger than and includes the first predetermined unit (e.g., a word, FIG. **9**M) of the text input.

It should be understood that the particular order in which the operations in FIGS. **10**A-**10**G have been described is merely exemplary and is not intended to indicate that the described order is the only order in which the operations could be performed. One of ordinary skill in the art would recognize various ways to reorder the operations described herein. Additionally, it should be noted that details of other processes described herein with respect to other methods described herein (e.g., methods **400** and **1100**) are also applicable in an analogous manner to method **1000** described above with respect to FIGS. **10**A-**10**G. For example, the contacts, gestures, user interface objects, intensity thresholds, and/or animations described above with reference to method **1000** optionally have one or more of the characteristics of the contacts, gestures, user interface objects, intensity thresholds, and/or animations described herein with reference to other methods described herein (e.g., methods **400** and **1100**). For brevity, these details are not repeated here.

FIGS. **11**A-**11**F illustrate a flow diagram of a method **1100** of selecting content in accordance with some embodiments. The method **1100** is performed at (**1102**) an electronic device (e.g., portable multifunction device **100**, FIG. **1**A) with one or more processors, memory, a touch-sensitive surface, a display, and one or more sensors to detect intensity of contacts with the touch-sensitive surface. In some embodiments, the display is a touch-screen display and the touch-sensitive surface is on or integrated with the display. In some embodiments, the display is separate from the touch-sensitive surface. Some operations in method **1100** are, optionally, combined and/or the order of some operations is, optionally, changed.

As described below, the method **1100** provides an efficient way to select content with press and movement inputs by a single continuous contact on the touch-sensitive surface, thereby creating a more efficient human-machine interface. For battery-operated electronic devices, enabling a user to select content faster and more efficiently conserves power and increases the time between battery charges.

While a contact (e.g., a finger contact or a stylus contact) is detected on the touch-sensitive surface, the device concurrently displays (**1104**) on the display content (e.g., editable content in FIGS. **9**A-**9**X and/or read-only content in FIGS. **9**Y-**9**AD) and a text selection indicator at a first location within the content.

In some embodiments, the text selection indicator is a cursor (e.g., cursor **922**) that moves within editable content (FIGS. **9**O-**9**R). In some embodiments, the text selection indicator is a selection box or other area that encloses selected content for read-only content (e.g., selection box **929**, FIG. **9**Z-**9**AD). In some embodiments, the text selection indicator indicates the starting location of content selection when no content is currently selected (FIG. **9**P), and indicates the end location of the currently selected content as a result of contact movement in a content selection mode. In some embodiments, the selection box has a starting edge that indicates the starting location of the selected content, and an end edge that indicates the end location of the selected content (e.g., FIGS. **9**S and **9**Z). In some embodiments, the cursor moves one character at a time (FIGS. **9**P-**9**R). In some embodiments, the selection box expands or contracts one word at a time (e.g., selection of read-only content by selection box **929**, FIGS. **9**Z-**9**AA). In some embodiments, the selection box selects at least one word at any given time (e.g., selection of read-only content, FIG. **9**Z). In some embodiments, a magnifying loupe (e.g., **908** in FIG. **9**P) is displayed with the cursor and shows a magnified version of the cursor and surrounding content. In some embodiments, a magnifying loupe is displayed with the selection box and shows a magnified version of the selection box and surrounding content (e.g., **952** in FIG. **9**S).

The device detects (**1106**) a first press input by the contact followed by movement of the contact across the touch-sensitive surface that corresponds to movement of at least a portion of the text selection indicator from the first location to a second location on the display (e.g., moving a cursor to the second location on the display or moving an edge of a selection box to the second location on the display, where the edge of the selection box corresponds to one end of the

selected content). In some embodiments, the device detects the first press input and the subsequent movement by detecting an increase in intensity of the contact above a predetermined intensity threshold (e.g., a deep press intensity threshold IT_D), followed by detecting a decrease in intensity of the contact to an intensity that remains above a predetermined minimum intensity value (e.g., a light press intensity threshold or a contact detection threshold). For example, as shown in FIG. **9**AA, after applying a deep press using contact **927** at time T_1, the user may ease the contact intensity on the touch-sensitive surface during movement of the contact, as long as a the contact intensity is maintained above a predetermined minimum value, such as the light press threshold intensity IT_L, or the contact detection threshold IT_0.

In response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface, the device selects (**1110**) content between the first location and the second location (e.g., selecting content for an editing operation, such as copying). In some embodiments, the selected content (e.g., editable text or read-only text) is enclosed by a highlighted area (e.g., area **928** in FIG. **9**S or area **929** in FIG. **9**AA) that starts at the first location (e.g., **926** in FIG. **9**S) and ends at the second location (e.g., **930** in FIG. **9**S). In some embodiments, the selected content is enclosed by the selection box that encloses a word at the first location and a word at the second location and every word in between (FIG. **9**AA). In some embodiments, the first location corresponds to the location of the contact on the touch-sensitive surface at the time that a first press input is received (e.g., in the middle of the word "nation" at time T_3 in FIG. **9**S), and the second location corresponds to the location of the contact on the touch-sensitive surface when a second press input is received (e.g., in the middle of the word "under" at time T_5 in FIG. **9**V).

While the content between the first location and the second location is selected (e.g., after moving at least the portion of the text selection indicator to the second location), the device detects (**1112**) a second press input by the contact on the touch-sensitive surface. For example, as shown in FIG. **9**V, the device detects an increase in intensity of the contact above an intensity threshold, such as a deep press threshold IT_D at time T_5.

In response to detecting the second press input by the contact on the touch-sensitive surface, the device performs (**1114**) a text selection operation, associated with the content between the first location and the second location, in accordance with the second press input. In some embodiments, the contact in the first press input, the movement across the touch-sensitive surface, and the second press input is a single continuous contact with the touch-sensitive surface (e.g., contact **924**, contact **925**, or contact **927**).

In some embodiments, in response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface: the device displays (**1116**) at least the portion of the text selection indicator at the second location within the content. For example, the device displays a cursor at the second location on the display (FIG. **9**U) or displays an edge of a selection box at the second location on the display (FIG. **9**AA), where the edge of the selection box corresponds to one end of the selected content. In some embodiments, the current location of the cursor corresponds to the current location of the contact on the touch-sensitive surface during the movement of the contact on the touch-sensitive surface.

In some embodiments, the text selection operation includes (**1118**) stopping selection of content at the second location and maintaining selection of the content between the first location and the second location (e.g., FIG. **9**V).

In some embodiments, after detecting the second press input and while the content between the first location and the second location remains selected, the device detects (**1120**) lift-off of the contact, and in response to detecting the lift-off of the contact, the device displays an action menu. For example, after detecting the second press input at a location on the touch-sensitive surface that corresponds to the second location on the display (e.g., in the middle of the word "under"), the device detects lift-off of the contact from that location on the touch-sensitive surface without detecting further movement of the contact. In response, the device displays an action menu bar **940** or other area that shows actions that can be performed on the selected portion of the text input (e.g., copying, defining, cutting, pasting, etc.) for the selected content between the first location and the second location.

In some embodiments, after detecting the second press input by the contact on the touch-sensitive surface and stopping the selection of the content at the second location, the device detects (**1124**) further movement of the contact. In response to detecting the further movement of the contact, the device displays at least a portion of the text selection indicator at a third location within the content. For example, in FIG. **9**W, after detecting the second press input at a location on the touch-sensitive surface that corresponds to the second location on the display (e.g., in FIG. **9**V, the press input at T_5 at a location on the touch-sensitive surface that corresponds to the middle of the word "under" on the display), the device detects further movement of the contact from that location on the touch-sensitive surface to another location on the touch-sensitive surface (e.g., in FIG. **9**W, to a location on the touch-sensitive surface that corresponds to the middle of the word "of" at T_6). In response, the device moves the cursor **922** or an edge of the selection box to the third location (e.g., to the middle of the word "of" in FIG. **9**W) in accordance with the movement of the contact on the touch-sensitive surface.

In some embodiments, in response to detecting the further movement of the contact, the device cancels (**1126**) selection of content between the first location and the second location without selecting content between the second location and the third location (FIG. **9**W).

In some embodiments, the text selection operation includes (**1128**) cancelling selection of content between the first location and the second location (FIG. **9**AB).

In some embodiments, after detecting the second press input by the contact on the touch-sensitive surface and canceling the selection of content between the first location and the second location, the device detects (**1130**) further movement of the contact. In response to detecting the further movement of the contact, the device selects content between the second location and a third location (FIGS. **9**AB-**9**AC).

In some embodiments, while the content between the second location and the third location is selected, the device detects (**1132**) lift-off of the contact (e.g., without detecting further movement of the contact). In response to detecting the lift-off of the contact while the content between the second location and the third location is selected, the device stops selection of the content at the third location and maintains selection of the content between the second location and the third location (as shown in FIGS. **9**AC-**9**AD).

In some embodiments, before displaying the text selection indicator at the first location within the content, the device detects (**1134**) an initial press input by the contact on the touch-sensitive surface. In response to detecting the initial

press input, the device displays the text selection indicator at an initial location within the content that corresponds to a location of the initial press input on the touch-sensitive surface. In some embodiments, the initial press input is (**1136**) detected at a location on the touch-sensitive surface that corresponds to a location of the content on the display. When the initial press input is detected at a location that corresponds to the first location within the content, the text selection indicator (e.g. the cursor **922**) is displayed at the first location within the content. If the initial press input is detected at a location that does not correspond to the first location within the content, the text selection indicator is displayed at the first location within the content when the contact, after making the initial press input, moves to a location on the touch-sensitive surface that corresponds to the first location. For example, for a "first location" of position marker **945** in FIG. **9**R (which corresponds to cursor **922**) between the letters "n" and "a" in "nation," the position marker was moved to this location after the initial press input shown in FIG. **9**Q placed position marker **945** between the letters "r" and "o" in "from."

In some embodiments, the display is a touch-sensitive display that includes the touch-sensitive surface, and the device concurrently displays (**1138**), on the touch-sensitive display, the content and an onscreen keyboard. In some embodiments, the initial press input is detected on the onscreen keyboard (FIG. **9**A).

In some embodiments, the display is a touch-sensitive display that includes the touch-sensitive surface, and the device concurrently displays (**1140**), on the touch-sensitive display, the content and an onscreen keyboard. Before displaying the text selection indicator at the first location within the content, the device detects (**1142**) a multi-contact drag input (e.g., a two-finger drag input as shown in FIG. **7**B) on the onscreen keyboard. In response to detecting the multi-contact drag input on the onscreen keyboard, the device displays the text selection indicator at an initial location within the content based on a location of the multi-contact drag input on the onscreen keyboard. In some embodiments, as shown in FIG. **7**B, the multi-contact drag input is detected on the onscreen keyboard, the keyboard is converted to a virtual trackpad as described with respect to FIG. **9**B, and the text selection indicator is displayed. Subsequent movement of the contact(s) in the multi-contact drag input on the virtual trackpad moves the text selection indicator within the content.

In some embodiments, the content includes (**1144**) editable content and the text selection indicator includes a cursor (FIG. **9**A). In such embodiments, the device displays (**1146**) a magnifying loupe that displays a magnified version of the cursor and a region surrounding the cursor in response to a deep press, as shown in FIG. **9**Q. Further, when selecting the content between the first location and the second location, the device moves (**1148**) the cursor one character space at a time in response to detecting the movement of the contact across the touch-sensitive surface and selects one additional character at a time in accordance with the movement of the cursor (FIG. **9**S).

In some embodiments, the content includes (**1150**) read-only content and the text selection indicator includes a selection area (e.g., a rectangular selection box **929**, FIG. **9**Z). In such embodiments, displaying the text selection indicator at the first location includes displaying a first word (e.g., "Translation" in FIG. **9**Z) located at the first location within the selection area. When selecting the read-only content between the first location and the second location, the device expands (**1152**) the selection area one word at a time in accordance with the movement of the contact across the touch-sensitive surface and selects one additional word at a time in accordance with the expansion of the selection area (e.g., "Translation: A U.S. Gift" in selection area **929** in FIG. **9**AA). In some embodiments, the device displays (**1154**) a magnifying loupe that displays a magnified version of the selection area and a region surrounding the selection area.

In some embodiments, the device foregoes (**1156**) performing the text selection operation, in response to detecting the second press input, in accordance with a determination that the second press input is accompanied by simultaneous movement of the contact across the touch-sensitive surface. For example, the text selection operation is not performed when the device detects the second press input accompanied by simultaneous movement of the contact. In other words, movement cancels the operation that is typically triggered by the second press input.

In some embodiments, when the text is editable text, the text selection indicator is a cursor and selecting content between the first location and the second location includes (**1158**) expanding the selection character-by-character in accordance with movement of the contact on the touch-sensitive surface (FIG. **9**S); and when the text is non-editable text, the text selection indicator is a selection region that initially encompasses a single word and selecting content between the first location and the second location includes expanding the selection word-by-word in accordance with movement of the contact on the touch-sensitive surface (FIG. **9**AA).

It should be understood that the particular order in which the operations in FIGS. **11**A-**11**F have been described is merely exemplary and is not intended to indicate that the described order is the only order in which the operations could be performed. One of ordinary skill in the art would recognize various ways to reorder the operations described herein. Additionally, it should be noted that details of other processes described herein with respect to other methods described herein (e.g., methods **400** and **1000**) are also applicable in an analogous manner to method **1100** described above with respect to FIGS. **11**A-**11**F. For example, the contacts, gestures, user interface objects, intensity thresholds, and/or animations described above with reference to method **1100** optionally have one or more of the characteristics of the contacts, gestures, user interface objects, intensity thresholds, and/or animations described herein with reference to other methods described herein (e.g., methods **400** and **1000**). For brevity, these details are not repeated here.

In accordance with some embodiments, FIG. **12** shows a functional block diagram of an electronic device **1200** configured in accordance with the principles of the invention as described above. The functional blocks of the device may be implemented by hardware, software, or a combination of hardware and software to carry out the principles of the invention. It is understood by persons of skill in the art that the functional blocks described in FIG. **12** may be combined or separated into sub-blocks to implement the principles of the invention as described above. Therefore, the description herein may support any possible combination or separation or further definition of the functional blocks described herein.

In some embodiments, the electronic device **1200** includes a display unit **1202** configured to concurrently display an onscreen keyboard and a content presentation region on the display unit **1202**, wherein the content presentation region displays text input received from the

onscreen keyboard; a touch-sensitive surface unit **1204** configured to receive user touch inputs; one or more sensor units **1206** to detect intensity of contacts with the touch-sensitive surface unit **1204**; and a processing unit **1208** coupled to the display unit **1202**, the touch-sensitive surface unit **1204**, and the one or more sensor units **1206**. In some embodiments, the processing unit **1208** includes a detecting unit **1210**, a determining unit **1216**, an obscuring unit **1218**, a moving unit **1214**, and a selecting unit **1212**.

The processing unit **1208** is configured to: detect a touch input on the onscreen keyboard displayed on the touch-sensitive surface unit **1204** (e.g., with the detecting unit **1210**); in response to detecting the touch input on the onscreen keyboard displayed on the display unit **1202**, determine whether the touch input satisfies one or more criteria for entering a text selection mode (e.g., with the determining unit **1216**); and in accordance with a determination that the touch input satisfies the one or more criteria for entering the text selection mode: concurrently display (e.g., with the displaying unit **1202**), in the content presentation region, a first cursor at a first location and a second cursor at a second location that is different from the first location.

In some embodiments, the one or more criteria for entering the text selection mode include the touch input including a two-finger drag gesture over the onscreen keyboard.

In some embodiments, the device has one or more sensor units **1206** to detect intensity of contacts with the touch-sensitive display; the touch input on the touch-sensitive display includes an input by a contact on the onscreen keyboard, and the one or more criteria for entering the text selection mode include the contact on the onscreen keyboard having an intensity that exceeds a predetermined deep press intensity threshold.

In some embodiments, the processing unit **1208** is configured to: in accordance with the determination that the touch input satisfies the one or more criteria for entering the text selection mode: visually obscure keys on the onscreen keyboard (e.g., with the obscuring unit **1218**).

In some embodiments, visually obscuring the keys on the onscreen keyboard includes applying a blurring effect to the onscreen keyboard (e.g., with the display unit **1202**).

In some embodiments, visually obscuring the keys on the onscreen keyboard includes transforming the onscreen keyboard into an onscreen touchpad (e.g., with the display unit **1202**).

In some embodiments, visually obscuring the keys on the onscreen keyboard includes making the onscreen keyboard semitransparent to partially reveal content lying underneath the onscreen keyboard (e.g., with the display unit **1202**).

In some embodiments, the second location is based on a location of an initial contact in the touch input; and the first location is a permitted insertion position in the content presentation region that is based on the second location.

In some embodiments, the first location is an insertion position at which the first cursor is located when the touch input is determined to satisfy the one or more criteria for entering the text selection mode; and the second location is displaced from the first location by a predetermined offset.

In some embodiments, one of the first and second cursors is already displayed in the content presentation region before both of the first and second cursors are concurrently displayed in the content presentation region.

In some embodiments, the processing unit **1208** is further configured to: detect movement of one or more contacts of the touch input (e.g., with the detecting unit **1210**); and move the second cursor within the content presentation region in accordance with the movement of the one or more contacts of the touch input (e.g., with the moving unit **1214**).

In some embodiments, the processing unit **1208** is further configured to: move the first cursor based on the movement of the second cursor, wherein movement of the first cursor includes discrete movements between permitted insertion positions in the content presentation region (e.g., with the moving unit **1214**).

In some embodiments, the processing unit **1208** is further configured to: detect a lift-off of the touch input after detecting the movement of the one or more contacts of the touch input (e.g., with the detecting unit **1210**); and in response to detecting the lift-off of the touch input: cease to display the second cursor (e.g., with the display unit **1202**).

In some embodiments, the processing unit **1208** is further configured to: in response to detecting the lift-off of the touch input, maintain display of the first cursor at a respective permitted insertion position reached by the first cursor after the discrete movements of the first cursor (e.g., with the display unit **1202**).

In some embodiments, the processing unit **1208** is further configured to: in response to detecting the lift-off of the touch input, cease to display the first cursor (e.g., with the display unit **1202**).

In some embodiments, the onscreen keyboard is obscured in accordance with the determination that the touch input satisfies the one or more criteria for entering the text selection mode, and the processing unit **1208** is further configured to: in response to detecting the lift-off of the touch input, restore display of the onscreen keyboard (e.g., with the display unit **1202**).

In some embodiments, the device has one or more sensor units **1206** to detect intensity of contacts with the touch-sensitive surface unit **1204**, and the processing unit **1208** is further configured to: in the text selection mode, detect that an intensity of a contact in the touch input exceeds a predetermined intensity threshold (e.g., with the detecting unit **1210**); after detecting that the intensity of the contact in the touch input exceeds the predetermined intensity threshold, detect movement of the contact in the touch input (e.g., with the detecting unit **1210**); in response to detecting the movement of the contact in the touch input, after detecting that the intensity of the contact in the touch input exceeds the predetermined intensity threshold: select a portion of the text input in accordance with the movement of the contact in the touch input (e.g., with the selecting unit **1212**).

In some embodiments, the selected portion of the text input begins at a position of the first cursor when the detected intensity of the contact in the touch input exceeded the predetermined intensity threshold.

In some embodiments, the processing unit **1208** is further configured to: detect lift-off of the contact in the touch input after selecting the portion of the text input in accordance with the movement of the contact in the touch input (e.g., with the detecting unit **1210**); and, in response to detecting the lift-off of the contact in the touch input, confirm selection of the portion of the text input (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is further configured to: after selecting the portion of the text input, while the portion of the text input is selected, detect an intensity of the contact in the touch input that exceeds the predetermined threshold (e.g., with the detecting unit **1210**); and, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold

while the portion of the text input is selected, clear selection of the portion of the text input (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is further configured to: after selecting the portion of the text input, while the portion of the text input is selected, detect an intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact (e.g., with the detecting unit **1210**); and, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by lift-off of the contact without further movement of the contact, confirm selection of the portion of the text input (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is further configured to: after selecting the portion of the text input, while the portion of the text input is selected, detect an intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by further movement of the contact (e.g., with the detecting unit **1210**); and, in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: clear selection of the portion of the text input (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is further configured to: in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: start selection of a new portion of the text input in accordance with the further movement of the contact (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is further configured to: in response to detecting the intensity of the contact in the touch input that exceeds the predetermined threshold and that is followed by the further movement of the contact: further move the second cursor and the first cursor within the content presentation region in accordance with the further movement of the contact (e.g., with the moving unit **1214**).

In some embodiments, the device has one or more sensor units (**1206**) to detect intensity of contacts with the touch-sensitive display, and the processing unit **1208** is further configured to: in the text selection mode, detect a first local intensity peak in the touch input followed by a second local intensity peak in the touch input that both exceed a predetermined intensity threshold (e.g., with the detecting unit **1210**); and, in response to detecting the first local intensity peak followed by the second local intensity peak that both exceed the predetermined intensity threshold, select a first predetermined unit of the text input according to a current location of the first cursor (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is further configured to: after detecting the first local intensity peak followed by the second local intensity peak, detect a third consecutive local intensity peak in the touch input that exceeds the predetermined intensity threshold (e.g., with the detecting unit **1210**); and in response to detecting the three consecutive local intensity peaks in the touch input that all exceed the predetermined deep press intensity threshold, select a second predetermined unit of the text input that is larger than and includes the first predetermined unit of the text input (e.g., with the selecting unit **1212**).

In some embodiments, the electronic device **1200** includes a display unit **1202** configured to, while a contact is detected on the touch-sensitive surface unit **1204**, concurrently display on the display unit **1202** content and a text selection indicator at a first location within the content; a touch-sensitive surface unit **1204** configured to receive user contacts; one or more sensor units **1206** to detect intensity of contacts with the touch-sensitive surface unit **1204**; and a processing unit **1208** coupled to the display unit **1202**, the touch-sensitive surface unit **1204**, and the one or more sensor units **1206**. In some embodiments, the processing unit **1208** includes a detecting unit **1210**, a determining unit **1216**, an obscuring unit **1218**, a moving unit **1214**, and a selecting unit **1212**.

The processing unit **1208** is configured to: detect a first press input by the contact followed by movement of the contact across the touch-sensitive surface unit **1204** that corresponds to movement of at least a portion of the text selection indicator from the first location to a second location on the display unit **1202** (e.g., with the detecting unit **1210**); in response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface unit **1204**, select content between the first location and the second location (e.g., with the selecting unit **1212**); while the content between the first location and the second location is selected, detect a second press input by the contact on the touch-sensitive surface unit **1204** (e.g., with the detecting unit **1210**); in response to detecting the second press input by the contact on the touch-sensitive surface unit, perform a text selection operation, associated with the content between the first location and the second location, in accordance with the second press input, wherein the contact in the first press input, the movement across the touch-sensitive surface unit **1204**, and the second press input is a single continuous contact with the touch-sensitive surface unit **1204** (e.g., with the selecting unit **1212**).

In some embodiments, detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface unit **1204** includes: detecting an increase in intensity of the contact above a predetermined intensity threshold followed by detecting a decrease in intensity of the contact to an intensity that remains above a predetermined minimum intensity value (e.g., with the detecting unit **1210**).

In some embodiments, the processing unit **1208** is configured to: in response to detecting the first press input by the contact followed by movement of the contact across the touch-sensitive surface unit **1204**: display at least the portion of the text selection indicator at the second location within the content (e.g., with the display unit **1202**).

In some embodiments, wherein the text selection operation includes stopping selection of content at the second location and maintaining selection of the content between the first location and the second location (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is configured to: after detecting the second press input and while the content between the first location and the second location remains selected, detect lift-off of the contact (e.g., with the detecting unit **1210**); and in response to detecting the lift-off of the contact, display an action menu for the selected content between the first location and the second location (e.g., with the display unit **1202**).

In some embodiments, the processing unit **1208** is configured to: after detecting the second press input by the contact on the touch-sensitive surface unit **1204** and stopping the selection of the content at the second location, detect further movement of the contact (e.g., with the detecting unit **1210**); and in response to detecting the further

movement of the contact, display at least a portion of the text selection indicator at a third location within the content (e.g., with the display unit **1202**).

In some embodiments, the processing unit **1208** is configured to: in response to detecting the further movement of the contact, cancel selection of content between the first location and the second location without selecting content between the second location and the third location (e.g., with the selecting unit **1212**).

In some embodiments, the text selection operation includes cancelling selection of content between the first location and the second location.

In some embodiments, the processing unit **1208** is configured to: after detecting the second press input by the contact on the touch-sensitive surface unit and canceling the selection of content between the first location and the second location, detect further movement of the contact (e.g., with the detecting unit **1210**); and, in response to detecting the further movement of the contact, select content between the second location and a third location (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is configured to: while the content between the second location and the third location is selected, detect lift-off of the contact (e.g., with the detecting unit **1210**); and, in response to detecting the lift-off of the contact while the content between the second location and the third location is selected, stop selection of the content at the third location and maintaining selection of the content between the second location and the third location (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is configured to: before displaying the text selection indicator at the first location within the content, detect an initial press input by the contact on the touch-sensitive surface unit **1204** (e.g., with the detecting unit **1210**); and in response to detecting the initial press input, enable display of the text selection indicator at an initial location within the content that corresponds to a location of the initial press input on the touch-sensitive surface unit **1204**.

In some embodiments, the display unit **1202** is a touch-sensitive display that includes the touch-sensitive surface unit **1204**, and the processing unit **1208** is configured to: concurrently display, on the touch-sensitive display, the content and an onscreen keyboard, wherein the initial press input is detected on the onscreen keyboard.

In some embodiments, the initial press input is detected at a location on the touch-sensitive surface unit **1204** that corresponds to a location of the content on the display unit **1202**.

In some embodiments, the display unit **1202** is a touch-sensitive display that includes the touch-sensitive surface unit **1204**, and the processing unit **1208** is configured to: concurrently enable display of, on the touch-sensitive display, the content and an onscreen keyboard; before displaying the text selection indicator at the first location within the content, detect a multi-contact drag input on the onscreen keyboard (e.g., with the detecting unit **1210**); and, in response to detecting the multi-contact drag input on the onscreen keyboard, enable display of the text selection indicator at an initial location within the content based on a location of the multi-contact drag input on the onscreen keyboard.

In some embodiments, the content includes editable content and the text selection indicator includes a cursor.

In some embodiments, the processing unit **1208** is configured to: enable display of a magnifying loupe that displays a magnified version of the cursor and a region surrounding the cursor.

In some embodiments, selecting the content between the first location and the second location includes: moving the cursor one character space at a time in response to detecting the movement of the contact across the touch-sensitive surface unit **1204** (e.g., with the moving unit **1214**); and selecting one additional character at a time in accordance with the movement of the cursor (e.g., with the selecting unit **1212**).

In some embodiments, the content includes read-only content and the text selection indicator includes a selection area; and displaying the text selection indicator at the first location includes displaying a first word located at the first location within the selection area (e.g., with the display unit **1202**).

In some embodiments, the processing unit **1208** is configured to: enable display of a magnifying loupe that displays a magnified version of the selection area and a region surrounding the selection area.

In some embodiments, selecting the content between the first location and the second location includes: expanding the selection area one word at a time in accordance with the movement of the contact across the touch-sensitive surface unit **1204** (e.g., with the selecting unit **1212**); and selecting one additional word at a time in accordance with the expansion of the selection area (e.g., with the selecting unit **1212**).

In some embodiments, the processing unit **1208** is configured to: forego performing the text selection operation, in response to detecting the second press input, in accordance with a determination that the second press input is accompanied by simultaneous movement of the contact across the touch-sensitive surface unit **1204**.

In some embodiments, when the text is editable text, the text selection indicator is a cursor and selecting content between the first location and the second location includes expanding the selection character-by-character in accordance with movement of the contact on the touch-sensitive surface unit **1204** (e.g., with the selecting unit **1212**); and when the text is non-editable text, the text selection indicator is a selection region that initially encompasses a single word and selecting content between the first location and the second location includes expanding the selection word-by-word in accordance with movement of the contact on the touch-sensitive surface unit **1204** (e.g., with the selecting unit **1212**).

Turning to FIGS. **13**A-**13**Q, these figures illustrate exemplary user interfaces for selecting content, moving a text selection indicator, and changing keyboard appearance based on contact intensity (e.g., pressure), in accordance with some embodiments. The user interfaces in these figures are used to illustrate the processes described below with respect to FIGS. **14**A-**14**H. FIGS. **13**A-**13**Q include intensity versus time diagrams that show the variations of a characteristic intensity of the contact on the touch-sensitive surface relative to a plurality of intensity thresholds (e.g., "IT_D", "IT_L", and "IT_0").

In FIG. **13**A, editable content **1300** is displayed in a content presentation region **1302** while an application is in a document editing mode. The application runs on a device **100** that has one or more sensors (e.g., contact intensity sensor(s) **259**, FIG. **2**B) to detect intensity of contacts with the touch-sensitive display. In the document editing mode, an onscreen keyboard **1321** is displayed for text inputs. A

user may enter text by touch inputs (e.g., by contact) on the onscreen keyboard **1321** and confirm completion of the editing by performing another touch input (e.g., a tap on "done" button) to exit the editing mode. An insertion marker (e.g., cursor **1322**) is displayed to indicate a current location for text inputs.

When entering text into the content region **1302**, a character can be entered upon detecting a touchdown or liftoff event. In some embodiments, entering the text into the content region **1302** includes entering a character that corresponds to character key at a location at which touchdown of the contact was detected on the onscreen keyboard. For example, touchdown of the finger contact **1324** was detected on the character key "h". In response to detecting the touchdown, character "h" is entered. In some embodiments, entering the text into the content region includes entering a character that corresponds to character key at a location at which liftoff of the contact was detected on the onscreen keyboard. For example, in response to liftoff of the finger contact **1324** from character key "h", character "h" is entered.

In FIG. **13**B, at time T_1, while in the editing mode and displaying the keyboard **1321**, the device detects a deep press by a finger contact **1324** on the onscreen keyboard **1321**, such that the intensity of the press input has increased above a text selection intensity threshold (e.g., IT_D) before the movement of the contact is detected. In response to detecting the deep press, the appearance of the keyboard **1321** changes to indicate that the application has entered a text selection mode. In the text selection mode, the keyboard **1321** is not responsive to keystrokes, but rather serves as an onscreen touchpad or track pad for moving the cursor or selecting content.

In some embodiments, the press input is a stationary press input such that there is less than a threshold amount of movement between when touchdown of the finger contact **1324** is detected on the onscreen keyboard **1321** and when the increase in the characteristic intensity of the contact over the text selection intensity threshold IT_D is detected. In some embodiments, if more than the threshold amount of movement is detected, upon liftoff, a character entry operation is performed based on which character entry key the contact is over when liftoff of the contact is detected.

As shown in FIG. **13**B, in some embodiments, the keys are visually obscured. Visually obscuring keys on the keyboard **1321** provides an intuitive indication that the function of the keyboard **1321** has changed. In some embodiments, the onscreen keyboard **1321** is dimmed, faded, or blurred relative to the keyboard **1321** shown in FIG. **13**A prior to detecting the deep press, such that the keys are no longer visible or clearly displayed as before. In some embodiments, as shown in FIG. **13**B, an indication of a location of the keys is maintained while the appearance of the characters is obscured (e.g., by maintaining display of the shapes of some or all of the keys on the keyboard while removing or blurring the characters on the key caps) and three-dimensional characteristics (e.g., a three-dimensional shape, drop shadow, etc.) of some or all of the keys are no longer visible. In some embodiments, the keyboard **1321** becomes semitransparent, to reveal content lying underneath the keyboard.

When the keyboard **1321** serves as an onscreen touch pad or track pad, in response to detecting finger movement **1332** started on the keyboard **1321**, text selection operations such as moving the cursor **1322** as shown in FIG. **13**B within the content region **1302** or selecting text within the content region **1302** as shown in FIGS. **13**D-**13**Q are performed. For example, after entering the text selection mode, upon detecting movement of the finger contact **1324** along a path **1332**, which started from the keyboard region **1321**, extended to the content region **1302**, and returned back to the keyboard region **1321**, the cursor **1322** is moved along a similar path in accordance with the movement of the finger contact **1324**. In some embodiments, in response to detecting movement of the contact after the touch input has satisfied the text selection criteria, instead of displaying cursor **1322** and cursor movement, a ghost cursor and a floating cursor are displayed, and the floating cursor is moved along a similar path in accordance with the movement of the finger contact **1324** as shown in FIGS. **9**B-**9**D and described in greater detail above.

FIGS. **13**C-**13**Q illustrate a variety of possible text selection behaviors that can occur after entering text selection mode (e.g., after time T_1), in accordance with some embodiments.

Turning to FIG. **13**C, at the end of the text selection mode (e.g., detecting liftoff of the contact such that the intensity of the press input has fallen to zero), in response to detecting liftoff of the contact, the device exits the text selection mode of operation. In conjunction with the end of the text selection mode of operation, the device reverses the change in appearance of the onscreen keyboard **1321** to reveal the characters on the keys of the onscreen keyboard **1321**. As shown in FIG. **13**C, the device reverses a fading or blurring of the keyboard **1321** to indicate that the device is no longer in the text selection mode of operation. In some embodiments, three-dimensional characteristics (e.g., a three-dimensional shape, drop shadow, etc.) of some or all of the keys are restored, and the characters on the key caps are displayed.

In FIG. **13**D, continuing the example shown in FIG. **13**B, while in the text selection mode, at time T_2, when a cursor is located in the middle of the word "imperdiet" (not shown in FIG. **13**D), the device detects a portion of the touch input (e.g., a second deep press with the same contact **1324**), such that the touch input satisfies selection-start criteria, which include a criterion that is met when the characteristic intensity of the contact increases above a selection-start intensity threshold. In some embodiments, the selection-start intensity threshold is the same as, greater than, or less than the text selection intensity threshold (e.g., IT_D) before the movement of the contact is detected. For illustration purpose, the selection-start intensity threshold is shown in FIG. **13**D as IT_D.

In response to detecting the second deep press by the same contact on the onscreen keyboard **1321** at time T_2, the device begins to select a portion of the text input **1328** in accordance with the movement **1332** of the contact in the touch input. After time T_2, during the movement **1332**, the intensity of the contact can be above or below the selection-start intensity threshold IT_D. In some embodiments, the text selection starts when an increase in intensity of the contact is detected while the contact is substantially stationary (e.g., moves not more than a threshold distance within a threshold amount of time before the characteristic intensity of the contact increases above the selection-start intensity threshold).

In FIG. **13**E, at time T_3, the device detects lift-off of the contact in the touch input, such that the intensity of the contact is below a contact detection threshold. In response to detecting the lift-off of the contact, in some embodiments, the device confirms selection of the portion of the text input **1328**. In some embodiments, a selection box **1328** (e.g., a grey box) is displayed on the selected portion of the text input, and/or a menu bar **1340** is displayed that showing actions that can be performed on the selected portion of the

text input (e.g., copying **1344**, defining, cutting **1342**, pasting, etc.). In some embodiments, the menu bar **1340** is displayed in response to a touch input on the selection box **1328**. Thus, FIGS. **13**D and **13**E illustrate using a substantially stationary deep press input by a contact **1324** to initiate text selection at time T_2, then movement of the contact to select text, followed by lift-off of the contact to confirm the selection at time T_3.

In FIG. **13**F, continuing the example shown in FIG. **13**D, instead of detecting a lift-off of the contact, after time T_2 and while continuing to detect the contact **1324** on the touch-sensitive display **112**, the device detects a subsequent change in intensity of the contact (e.g. a substantially stationary deep press with the same contact) at time T_3. Upon detecting the substantially stationary deep press at time T_3, in accordance with a determination that the change in intensity of the contact satisfies selection-cancellation criteria, the device cancels the selection (e.g., deselecting the selected content and redisplaying the cursor). In some embodiments, as shown in FIG. **13**F, upon the selection cancellation, the cursor **1322** is displayed at the end of the selection (e.g., at the end of the word "enim"). In some embodiments, upon cancelling the selection, the cursor **1322** is displayed at the beginning of the selection.

In some embodiments, the selection-cancellation criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-cancellation intensity threshold (e.g., a threshold that is the same as, greater than, or less than the text-selection intensity threshold and/or the selection-start intensity threshold). For illustration purpose, the selection-cancellation intensity threshold shown in FIG. **13**F is the same as the text-selection intensity threshold and the selection-start intensity threshold IT_D. In some embodiments, the selection-cancellation criteria are met when an increase in intensity of the contact is detected while the contact is substantially stationary (e.g., the contact **1324** moves no more than a threshold distance within a threshold amount of time before the characteristic intensity of the contact increases above the selection-cancellation intensity threshold).

In FIG. **13**G, following the substantially stationary deep press at time T_3 to cancel the selection and redisplay the cursor at the end of the word "enim", while continuing to detect the contact on the touch-sensitive display **112** after time T_3, the device detects a subsequent change in the intensity of the contact at time T_4. In response to detecting the subsequent change in the characteristic intensity of the contact and in accordance with a determination that the touch input (e.g., the subsequent change in the characteristic intensity of the contact at time T_4) satisfies the selection-start criteria described above with respect to FIG. **13**D, the device starts a new selection of content in the content region **1302** in accordance with the finger movement **1332**. The new selection starts at the end of the word "enim", where the cursor **1332** was located when the deep press was detected at time T_4, and expands character by character in accordance with the finger movement **1332**. Thus, FIGS. **13**D, **13**F, and **13**G illustrate a first deep press by a contact **1324** to initiate a text selection at time T_2, then movement of the contact **1324** to select text, followed by a second deep press with the same contact at time T_3 to cancel the text selection and display a cursor at the end of the selection, and a third deep press with the same contact at time T_4 to restart a new text selection.

In some embodiments, continuing the example shown in FIG. **13**F, the new text selection includes a selection of a respective word. When the third subsequent change detected at time T_4 includes an increase in the characteristic intensity of the contact above the selection-start intensity threshold, a word is selected at the location of the cursor. For example, in FIG. **13**F, after the selection cancellation at time T_3, the cursor **1332** is located at the end of the word "enim". Subsequently, as shown in FIG. **13**H, the word "enim" is selected at the location of the cursor in response to detecting a deep press at time T_4.

In FIG. **13**H, the deep press by contact **1324** is substantially stationary. Alternatively, in some embodiments, when the third subsequent change in the touch input includes an increase in the characteristic intensity of the contact above the selection-start intensity threshold followed by movement of the contact, selection is started at the location of the cursor and expanded character by character in accordance with the movement of the contact; and in response to a subsequent increase in the characteristic intensity of the contact above a respective intensity threshold (e.g., the selection-start intensity threshold) within a threshold time, the current selection is expanded to include the entire word that was partially selected during the character-by-character expansion.

In FIG. **13**I, continuing the example shown in FIG. **13**H, while the respective word "enim" is selected, a subsequent finger movement **1332** is detected after time T_4. In response to detecting the subsequent finger movement **1332** while the respective word "enim" is selected, in accordance with a determination that the touch input meets selection-movement criteria, the selection of the first word "enim" is canceled, and a second word "imperdiet" is selected that is adjacent to the first word in a first direction (e.g., before or after the respective word) in accordance with the subsequent finger movement **1332**, such that the selected respective word is the second word "imperdiet". As shown in FIG. **13**H, the subsequent finger movement **1332** is moving in a left/up direction. As a result, the word "imperdiet" that is before the word "enim" is selected. Conversely, in case a right/down finger movement is detected, a word after the word "enim" is selected.

In some embodiments, the selection-movement criteria include a movement criterion that is met when the contact moves more than a respective threshold amount (e.g., the contact is not substantially stationary and optionally a respective time criterion that is met when an amount of time between the third subsequent change in the characteristic intensity of the contact is detected and when the first subsequent movement of the contact is detected is less than a respective delay threshold). Thus, FIGS. **13**H and **13**I illustrate selecting a first word, cancels selection of the first word and selects a second word that is adjacent to a first word "enim" in a direction in accordance with the finger movement **1332**.

In FIG. **13**J, continuing the example shown in FIG. **13**H, while the respective word "enim" is selected, a subsequent finger movement **1332** is detected. In response to detecting the subsequent finger movement **1332** while the respective word "enim" is selected, in accordance with a determination that the touch input meets selection-expansion criteria at time T_4, the device expands the selection of the respective word "enim" to include a word "imperdiet" that is adjacent to the word "enim" in a direction of the finger movement **1332** (e.g., before or after the respective word "enim") without selecting one or more words in the respective sentence "Numc viverra imperdiet enim." that are adjacent to the respective word "enim" in the respective sentence in a direction that is different from the direction of the finger movement **1332**. In other words, the expansion only goes in

the direction corresponding to the finger movement **1332**, and does not expand to include words in the reverse direction of the movement (e.g., as distinguished from expansion to select the whole sentence or more described below with respect to FIGS. **13**K-**13**Q). In some embodiments, the selection expansion criteria include a criterion that is met when the contact moves more than the threshold amount (e.g., that the contact has remained stationary for at least a threshold amount of time prior to detecting the increase in intensity and that the increase in intensity was detected less than a threshold amount of time after detecting the third subsequent change in the characteristic intensity of the contact). Thus, FIGS. **13**H and **13**J illustrate selecting a word "enim" and expanding the selection word by word in a direction in accordance with the finger movement **1332**.

In FIG. **13**K, continuing the example shown in FIG. **13**H, while the respective word "enim" is selected, the device detects another subsequent change in the intensity of the contact above a respective intensity threshold (e.g., the selection-cancellation intensity threshold) at time T_5. The touch input **1324** meets selection-cancellation criteria described above with respect to FIG. **13**F, the device cancels selection of the respective sentence and displays the cursor **1332** at the end of the selection. Thus, FIGS. **13**H and **13**K illustrate a deep press to select a word at time T_4 followed by another deep press at time T_5 to cancel the selection.

In FIG. **13**L, continuing the example shown in FIG. **13**H, while the respective word "enim" is selected, the device detects another subsequent change in the intensity of the contact above a respective intensity threshold (e.g., the selection-start intensity threshold) at time T_5, such that the touch input **1324** meets sentence-selection criteria, e.g., the contact is substantially stationary before (e.g., just before) the subsequent change in intensity of the contact was detected at time T_5 and the amount of time between T_4, when the previous subsequent change in the characteristic intensity of the contact is detected, and T_5, when the subsequent change in the characteristic intensity of the contact is detected, is less than a delay threshold. In response to detecting such change in the touch input at time T_5. (e.g., in response to detecting the subsequent change in the intensity of the contact at time T_5), the device expands the selection **1328** to include the (entire) respective sentence "Nunc viverra imperdiet enim." that contains the respective word "enim". Thus, FIGS. **13**H and **13**L illustrate a deep press at time T_4 to select a word followed by another deep press at time T_5 within a threshold time and while the contact remains substantially stationary, to expand the selection to a sentence containing the selected word.

In FIG. **13**M, while the respective sentence "Nunc viverra imperdiet enim." is selected, the device detects a subsequent movement of the contact **1332**. In response to detecting the subsequent movement of the contact **1332** while the respective sentence is selected and in accordance with a determination that the touch input meets selection-expansion criteria described above with respect to FIG. **13**J, the device expands the selection to include a sentence that is adjacent to the respective sentence in a first direction (e.g., before or after the respective sentence) in accordance with the subsequent movement of the contact (e.g., the expansion of the selection does not select one or more sentences in a respective paragraph that includes the respective sentence, that are adjacent to the respective sentence in the respective paragraph in a second direction that is different from the first direction). In other words, the expansion to include the sentence "Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna." only goes in the direction corresponding to the movement of the contact **1332**, and does not expand to include in the reverse direction of the movement (e.g., as distinguished from expansion to select the whole paragraph or more described below). Thus, FIGS. **13**L and **13**M illustrate after a sentence selection at time T_5, expanding the selection sentence by sentence in a direction in accordance with the finger movement **1332**.

In FIG. **13**N, continuing the example shown in FIG. **13**L, in some embodiments, while the respective sentence "Nunc viverra imperdiet enim." is selected, the device detects a subsequent change in the characteristic intensity of the contact above the respective intensity threshold (e.g., the selection-start intensity threshold) at time T_6. In response to detecting the subsequent change in the characteristic intensity of the contact at time T_6, in accordance with a determination that the touch input meets the selection-cancellation criteria described above with respect to FIG. **13**F, the device cancels selection of the respective sentence and displays the cursor **1322** at the end of the selection. Thus, FIGS. **13**L and **13**M illustrate after a deep press to select a sentence at time T_5, in response to another deep press at time T_6 (which is more than a threshold amount of time after T_5), the sentence selection is cancelled.

In FIG. **13**O, following the deep press at time T_5, the device detects a subsequent change in the characteristic intensity of the contact above the respective intensity threshold (e.g., the selection-start intensity threshold) at time T_6. In response to detecting the subsequent change in the characteristic intensity of the contact at time T_6, in accordance with a determination that the touch input **1324** (e.g., the subsequent change in the characteristic intensity of the contact detected at time T_6) meets paragraph-selection criteria (e.g., the paragraph-selection criteria include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period (e.g., is substantially stationary) before (e.g., just before) the subsequent change in intensity of the contact was detected at T_6 and a time criterion that is met when an amount of time between when the deep press is detected at time T_5 and when the subsequent change in the characteristic intensity of the contact is detected at time T_6 is less than the delay threshold), the device expands the selection to include the (entire) respective paragraph that contains the respective sentence. Thus, FIGS. **13**L and **13**O illustrate after a deep press to select a sentence at time T_5, in response to detecting another deep press that meets paragraph-selection criteria, the sentence selection is expanded to a paragraph containing the sentence.

In FIG. **13**P, continuing the example shown in FIG. **13**O, while the respective paragraph is selected, the device detects subsequent movement of the contact **1332** after time T_6. In response to detecting the subsequent movement of the contact while the respective paragraph is selected, in accordance with a determination that the touch input (e.g., the movement detected at time T_6) meets selection-expansion criteria described above with respect to FIG. **13**J, the device expands the selection to include a paragraph that is adjacent to the respective paragraph in a first direction (e.g., before or after the respective paragraph) in accordance with the subsequent movement of the contact **1332**.

For example, in FIG. **13**P, the expansion of the selection does not select one or more paragraph in a respective document that includes the respective paragraph, that are adjacent to the respective paragraph in the respective document in a second direction that is different from the first direction. In other words, the expansion only goes in the

direction corresponding to the movement of the contact, and does not expand to include in the reverse direction of the movement (e.g., as distinguished from expansion to select the whole document described below). Thus, FIGS. **13**O and **13**P illustrate after a paragraph selection, expanding the selection paragraph by paragraph in a direction in accordance with the finger movement **1332**.

In FIG. **13**Q, continuing the example shown in FIG. **13**O, while the respective paragraph is selected, the device detects a subsequent change in the characteristic intensity of the contact above the respective intensity threshold (e.g., the selection-start intensity threshold) at time T_7. In response to detecting the subsequent change in the characteristic intensity of the contact at time T_7, in accordance with a determination that the touch input (e.g., the subsequent change in the characteristic intensity of the contact at T_7) meets selection-cancellation criteria (e.g., the deep press detected at T_7 is more than a threshold amount of time after the deep press detected at T_6) described above with respect to FIG. **13**F, the device cancels selection of the respective paragraph. Thus, FIGS. **13**O and **13**Q illustrate after a paragraph selection, in response to detecting a subsequent deep press that meets selection-cancellation criteria, cancelling the paragraph selection.

Though not shown in figures, continuing the example shown in FIG. **13**O, while the respective paragraph is selected, the selected paragraph can be expanded to the entire document that contains the selected paragraph in response to detecting a subsequent deep press at T_7 after time T_6. The subsequent deep press is a subsequent change in the characteristic intensity of the contact such that the subsequent change meets document-selection criteria, which include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period (e.g., is substantially stationary) before (e.g., just before) the subsequent deep press was detected, and a time criterion that is met when an amount of time between when the deep press is detected at time T_6 and when the subsequent deep press is detected at T_7 is less than the delay threshold.

FIGS. **14**A-**14**H illustrate a flow diagram of method **1400** of content manipulation in accordance with some embodiments. Method **1400** is performed at an electronic device (e.g., portable multifunction device **100**, FIG. **1**A) with one or more processors, memory, and a display. In some embodiments, the display is a touch-screen display and the touch-sensitive surface is on or integrated with the display. In some embodiments, the display is separate from the touch-sensitive surface. Some operations in method **1400** are, optionally, combined and/or the order of some operations is, optionally, changed.

As described below, method **1400** provides an efficient way to manipulate a cursor. The method reduces the cognitive burden on a user when using a cursor, thereby creating a more efficient human-machine interface. For battery-operated electronic devices, enabling a user to manipulate a cursor faster and more efficiently conserves power and increases the time between battery charges.

The device concurrently displays (**1402**) an onscreen keyboard (e.g., keyboard **1321**, FIG. **13**A) and a content presentation region (e.g., region **1302**, FIG. **13**A) on the touch-sensitive display. In some embodiments, the content presentation region displays text input received from the onscreen keyboard (FIG. **13**A). The device further detects (**1404**) a touch input on the onscreen keyboard displayed on the touch-sensitive display (e.g., by finger contact **1324**, FIG. **13**A). In some embodiments, detecting the touch input includes detecting movement of a contact (e.g., FIGS. **13**B and **13**D etc.) and liftoff of the contact (e.g., FIGS. **13**C and **13**E).

In some embodiments, in response to detecting (**1406**) the touch input on the onscreen keyboard displayed on the touch-sensitive display, in accordance with a determination that the touch input satisfies text-selection criteria, the text-selection criteria include a criterion that is met when a characteristic intensity of the contact increases above a text-selection intensity threshold (e.g., a deep press with contact characteristic intensity increases above ITS at time T_1, FIG. **13**B), the device performs (**1408**) a text selection operation based on the movement of the contact (FIGS. **13**D-**13**Q). In some embodiments, the text-selection criteria include (**1410**) a criterion that is met when the contact does not move more than a threshold distance before detect an increase in the characteristic intensity of the contact above the text-selection intensity threshold (e.g., the finger contact **1324** is substantially stationary at time T_1, there is less than a threshold amount of movement between when touchdown of the contact **1324** is detected on the onscreen keyboard and when the increase in the characteristic intensity of the contact over the text-selection intensity threshold is detected at time T_1, FIG. **13**B). In some embodiments, if more than the threshold amount of movement is detected, upon liftoff, a character entry operation is performed based on which character entry key the contact is over when liftoff of the contact is detected. In some embodiments, the text-selection operation includes (**1412**) one of: moving a cursor within the content region (as shown in FIG. **13**B) or selecting text within the content region (e.g., as shown in FIGS. **13**D-**13**Q).

In addition to text-selection operations, in response to detecting (**1406**) the touch input on the onscreen keyboard displayed on the touch-sensitive display and in accordance with a determination that the touch input satisfies text-entry criteria (e.g., as shown in FIG. **13**A), the text-entry criteria include a criterion that is met when the characteristic intensity of the contact does not increase above the text-selection intensity threshold, the device enters (**1414**) text into the content presentation region based on the touch input (e.g., entering text when the contact characteristic intensity does not increase above ITS, FIG. **13**A). In some embodiments, the text-entry criteria include (**1416**) a criterion that is met when the liftoff of the contact is detected while the contact is at a location of a character key of the onscreen keyboard. In some embodiments, the text-entry criteria include (**1418**) a criterion that is met when the contact does not move outside of the onscreen keyboard before liftoff of the contact is detected. In some embodiments, entering the text into the content region includes (**1420**) entering a character that corresponds to character key at a location at which touchdown of the contact was detected on the onscreen keyboard (e.g., entering character "h" when a touchdown of the contact **1324** is detected, FIG. **13**A). In some embodiments, entering the text into the content region includes (**1422**) entering a character that corresponds to character key at a location at which liftoff of the contact was detected on the onscreen keyboard (e.g., entering character "h" when a liftoff of the contact **1324** is detected, FIG. **13**A).

In some embodiments, in response to detecting that the text-selection criteria have been met, the device generates (**1424**) a tactile output (e.g., with one or more tactile output generating components of the device, **167** in FIG. **2**A and/or **257** in FIG. **2**B) that is indicative of an entry into a text selection mode of operation. In some embodiments, the tactile output that is indicative of entry into the text selection

mode of operation is different from the tactile output that is generated when a device alert such as a notification of an incoming message is provided by the device.

In some embodiments, in response to detecting that the text-selection criteria have been met, the device changes (**1426**) an appearance of the onscreen keyboard to indicate that the device is operating in a text selection mode of operation. In some embodiments, changing the appearance of the onscreen keyboard includes obscuring an appearance of characters on keys of the onscreen keyboard (e.g., blurring in FIG. **9**N, fading, and/or removing the characters on the key caps in FIG. **13**B). In some embodiments, an indication of a location of the keys is maintained while the appearance of the characters is obscured (e.g., by maintaining display of the shapes of some or all of the keys on the keyboard while removing or blurring the characters on the key caps and the drop shadows of the key caps, FIG. **13**B). In some embodiments, the device ends (**1428**) the text selection mode of operation (e.g., detecting liftoff of the contact and, in response to detecting liftoff of the contact, exiting the text selection mode of operation, FIGS. **13**C and **13**E) and, in conjunction with the end of the text selection mode of operation, the device reverses the change in appearance of the onscreen keyboard to reveal the characters on the keys of the onscreen keyboard (e.g., reversing a fading, blurring of the keyboard to indicate that the device is no longer in the text selection mode of operation, FIGS. **13**C and **13**E).

In some embodiments, when the touch input satisfies the text-selection criteria, the device detects (**1430**) movement of the contact after the touch input has satisfied the text-selection criteria and moving a cursor (FIG. **13**B) in the content region in accordance with the movement of the contact detected after the touch input has satisfied the text-selection criteria. In some embodiments, instead of displaying a cursor and moving the cursor, a ghost cursor and a floating cursor are displayed and moved in the content region in accordance with the movement of the contact, as described in greater detail above with respect to FIGS. **9**B-**9**D.

In some embodiments, when the touch input satisfies the text-selection criteria, the device detects (**1432**) a first subsequent change (e.g., a deep press at time T_2, FIG. **13**D) in the characteristic intensity of the contact (optionally, after first detecting a decrease in intensity of the contact to an intensity below the text-selection intensity threshold) followed by additional movement of the contact on the touch-sensitive display. In response to detecting (**1434**) the first subsequent change in the characteristic intensity of the contact and in accordance with a determination that the touch input satisfies selection-start criteria, the selection-start criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-start intensity threshold (e.g., a threshold that is the same as, greater than, or less than the text-selection intensity threshold IT_D before the movement of the contact is detected, FIG. **13**D), the device starts (**1436**) to select content in the content region at a location of a cursor in accordance with the additional movement of the contact (e.g., starting the selection at the location of the cursor and expand the selection character by character in accordance with the movement of the contact as shown in FIG. **13**G; or start selection at the word at the location of the cursor, and expand the selection word by word in accordance with the movement of the contact as shown in FIGS. **13**H and **13**J). On the other hand, in accordance with a determination that the touch input does not satisfy the selection-start criteria, the device moves the cursor in accordance with the additional movement of the contact without starting to select content in the content region (FIG. **13**B). In some embodiments, the selection-start criteria are met when an increase in intensity of the contact is detected while the contact is substantially stationary (e.g., moves not more than a threshold distance within a threshold amount of time before the characteristic intensity of the contact increases above the selection-start intensity threshold).

In some embodiments, when the touch input satisfies selection-start criteria, after starting to select content in the content region, the device detects (**1438**) liftoff of the contact from the touch-sensitive display and confirms the selection in response to detecting the liftoff of the contact (e.g., as shown in FIG. **13**E).

Alternatively, when the touch input satisfies selection-start criteria, after starting to select content in the content region, and while continuing to detect the contact on the touch-sensitive display, the device detects (**1440**) a second subsequent change in intensity of the contact (e.g., a deep press at time T_3 in FIG. **13**F). In response to detecting (**1442**) the second subsequent change in the characteristic intensity of the contact and in accordance with a determination that the second subsequent change in the characteristic intensity of the contact satisfies selection-cancellation criteria, the selection-cancellation criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-cancellation intensity threshold (e.g., a threshold that is the same as, greater than, or less than the text-selection intensity threshold and/or the selection-start intensity threshold ITS), the device cancels (**1444**) the selection (e.g., deselecting the selected content and redisplaying the cursor, as shown in FIG. **13**F). On the other hand, in response to detecting the second subsequent change in the characteristic intensity of the contact and in accordance with a determination that the second subsequent change in the characteristic intensity of the contact does not satisfy the selection-cancellation criteria (e.g., if the contact did not reach the selection-cancellation intensity threshold and/or the contact was not substantially stationary when the selection-cancellation intensity threshold was reached), the device maintains the selection (e.g., and expanding the selection or contracting the selection in accordance with continued movement of the contact on the touch-sensitive display, as shown in FIG. **13**D). In some embodiments, the selection-cancellation criterion include (**1446**) a criterion that is met when the contact moves no more than a threshold distance within a threshold amount of time before the characteristic intensity of the contact increases above the selection-cancellation intensity threshold.

In some embodiments, in response to detecting that the selection-cancellation criteria have been met, the device generates (**1448**) a tactile output (e.g., with one or more tactile output generating components of the device, **167** in FIG. **2**A and/or **257** in FIG. **2**B) that is indicative of an exit from the text selection mode of operation. In some embodiments, the tactile output that is indicative of exit from the text selection mode of operation is different from the tactile output that is generated when a device alert such as a notification of an incoming message is provided by the device. In some embodiments, this tactile output is not generated when corresponding selection cancellation operations are performed in the text (as opposed to being performed on the keyboard).

In some embodiments, after canceling the selection, and while continuing to detect the contact on the touch-sensitive display, the device detects (**1450**) a third subsequent change

in the characteristic intensity of the contact (e.g., a deep press at time T_4 in FIG. **13**G). In response to detecting (**1452**) the third subsequent change in the characteristic intensity of the contact and in accordance with a determination that the touch input (e.g., the third subsequent change in the characteristic intensity of the contact) satisfies the selection-start criteria, the device starts (**1454**) to select content in the content region at a location of the cursor (as shown in FIG. **13**G). On the other hand, in response to detecting the third subsequent change in the characteristic intensity of the contact and in accordance with a determination that the touch input (e.g., the third subsequent change in the characteristic intensity of the contact) does not satisfy the selection-start criteria, the device forgoes starting to select content in the content region.

In some embodiments, starting to select content in response to detecting the third subsequent change in the characteristic intensity of the contact includes (**1456**) selecting a respective word at the location of the cursor (as shown in FIG. **13**H). For example, after the cancelation of the selection (e.g., in response to a deep press at time T_3 in FIG. **13**F), when the third subsequent change includes an increase in the characteristic intensity of the contact above the selection-start intensity threshold (e.g., a deep press at time T_4 in FIG. **13**H), a word is selected at the location of the cursor (as shown in FIG. **13**H).

In some embodiments, the selected respective word is (**1458**) a first word (e.g., the word "enim" is the selected first word, FIG. **13**H). In some embodiments, while the first word is selected, the device detects first subsequent movement of the contact (**13**I). In response to detecting the first subsequent movement of the contact while the first word is selected and in accordance with a determination that the touch input meets selection-movement criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount (e.g., the contact is not substantially stationary and optionally a respective time criterion that is met when an amount of time between the third subsequent change in the characteristic intensity of the contact is detected and when the first subsequent movement of the contact is detected is less than a respective delay threshold), the device cancels selection of the first word and selects a second word that is adjacent to the first word in a first direction (e.g., before or after the respective word) in accordance with the first subsequent movement of the contact, such that the selected respective word is the second word (e.g., as shown in FIG. **13**I).

In some embodiments, instead of selecting a second word that is adjacent to the first word, while the respective word is selected (e.g., as shown in FIG. **13**H), the device detects (**1460**) first subsequent movement of the contact (e.g., as shown in FIG. **13**J). In response to detecting the first subsequent movement of the contact while the respective word is selected and in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount (e.g., the contact is not substantially stationary and optionally a respective time criterion that is met when an amount of time between the third subsequent change in the characteristic intensity of the contact is detected and when the first subsequent movement of the contact is detected is less than a respective delay threshold), the device expands the selection to include a word that is adjacent to the respective word in a first direction (e.g., before or after the respective word) in accordance with the first subsequent movement of the contact (e.g., as shown in FIG. **13**J).

In some embodiments, instead of selecting a second word that is adjacent to the first word or expanding the selection word by word in respect to detecting a subsequent movement of the contact, while the respective word is selected, the device detects (**1462**) a fourth subsequent change (e.g., a deep press at time T_5, as shown in FIG. **13**K) in the characteristic intensity of the contact above a respective intensity threshold (e.g., the selection-cancellation intensity threshold). In response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input (e.g., the fourth subsequent change in the characteristic intensity of the contact at time T_5) meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold (e.g., and, optionally, that the contact is substantially stationary), the device cancels selection of the respective word (e.g., as shown in FIG. **13**K).

In some embodiments, instead of canceling a selected word in response to a fourth subsequent change in the characteristic intensity of the contact above a respective intensity threshold, while the respective word is selected, the device detects (**1464**) a fourth subsequent change (e.g., a deep press at time T_5, FIG. **13**L) in the characteristic intensity of the contact above a respective intensity threshold (e.g., the sentence-selection intensity threshold). In response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input (e.g., the fourth subsequent change in the characteristic intensity of the contact at time T_5) meets sentence-selection criteria which include a movement criterion that is met when the contact moves less than a threshold amount within a threshold time period (e.g., the contact is substantially stationary) before (e.g., just before) the fourth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is less than a delay threshold, the device expands the selection to include the (entire) respective sentence that contains the respective word (e.g., as shown in FIG. **13**L).

In some embodiments, while the respective sentence is selected, the device detects (**1466**) second subsequent movement of the contact (e.g., as shown in FIG. **13**M). In response to detecting the second subsequent movement of the contact while the respective sentence is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount (e.g., the contact is not substantially stationary and optionally a respective time criterion that is met when an amount of time between the fourth subsequent change in the characteristic intensity of the contact is detected and when the second subsequent movement of the contact is detected is less than a respective delay threshold), the device expands the selection to include a sentence that is adjacent to the respective sentence in a first direction (e.g., before or after the respective sentence) in accordance with the second subsequent movement of the contact (e.g., the expansion of the selection does not select one or more sentences in a respective paragraph that includes the respective sentence, that are adjacent to the

respective sentence in the respective paragraph in a second direction that is different from the first direction (e.g., as shown in FIG. **13**M).

In some embodiments, instead of expanding the sentence selection in response to a subsequent movement of the contact, while the respective sentence is selected, the device detects (**1468**) a fifth subsequent change in the characteristic intensity of the contact above the respective intensity threshold (e.g., the selection-start intensity threshold) (e.g., as shown in FIG. **13**N). In response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold (e.g., and, optionally, that the contact is substantially stationary), the device cancels selection of the respective sentence (e.g., as shown in FIG. **13**N).

In some embodiments, instead of canceling the sentence selection, in response to detecting a subsequent change in the characteristic intensity of the contact, in response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets paragraph-selection criteria which include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period (e.g., is substantially stationary) before (e.g., just before) the fifth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, the device expands (**1470**) the selection to include the (entire) respective paragraph that contains the respective sentence (e.g., as shown in FIG. **13**O).

In some embodiments, while the respective paragraph is selected, the device detects (**1472**) third subsequent movement of the contact. In response to detecting the third subsequent movement of the contact while the respective paragraph is selected: in accordance with a determination that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, the device expands the selection to include a paragraph that is adjacent to the respective paragraph in a first direction in accordance with the third subsequent movement of the contact (e.g., as shown in FIG. **13**P).

In some embodiments, the respective paragraph is selected in response to the fifth subsequent change in the characteristic intensity of the contact. While the respective paragraph is selected: the device detects (**1474**) a sixth subsequent change in the characteristic intensity of the contact above the respective intensity threshold; and, in response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets selection-cancellation **138-156** criteria, which includes a criterion that is met when the amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, the device cancels selection of the respective paragraph (e.g., as shown in FIG. **13**Q).

In some embodiments, in response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination that the touch input meets document selection criteria which include a movement criterion that is met when the contact moves less than the threshold amount within the threshold time period before the sixth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, the device expands (**1476**) the selection to include the respective document that contains the respective paragraph.

It should be understood that the particular order in which the operations in FIGS. **14**A-**14**H have been described is merely exemplary and is not intended to indicate that the described order is the only order in which the operations could be performed. One of ordinary skill in the art would recognize various ways to reorder the operations described herein. Additionally, it should be noted that details of other processes described herein with respect to other methods described herein (e.g., methods **400**, **1000**, and **1100**) are also applicable in an analogous manner to method **1400** described above with respect to FIGS. **14**A-**14**H. For example, the contacts, gestures, user interface objects, intensity thresholds, and/or animations described above with reference to method **1400** optionally have one or more of the characteristics of the contacts, gestures, user interface objects, intensity thresholds, and/or animations described herein with reference to other methods described herein (e.g., methods **400**, **1000**, and **1100**). For brevity, these details are not repeated here.

In accordance with some embodiments, FIG. **15** shows a functional block diagram of an electronic device **1500** configured in accordance with the principles of the invention as described above. The functional blocks of the device may be implemented by hardware, software, or a combination of hardware and software to carry out the principles of the invention. It is understood by persons of skill in the art that the functional blocks described in FIG. **15** may be combined or separated into sub-blocks to implement the principles of the invention as described above. Therefore, the description herein may support any possible combination or separation or further definition of the functional blocks described herein.

In some embodiments, the electronic device **1500** includes a display unit **1502** configured to concurrently display an onscreen keyboard and a content presentation region on the display unit **1502**, wherein the content presentation region displays text input received from the onscreen keyboard; a touch-sensitive surface unit **1504** configured to receive user touch inputs; one or more sensor units **1506** to detect intensity of contacts with the touch-sensitive surface unit **1504**; and a processing unit **1508** coupled to the display unit **1502**, the touch-sensitive surface unit **1504**, and the one or more sensor units **1506**. In some embodiments, the processing unit **1508** includes a detecting unit **1510**, a selecting unit **1512**, a moving unit **1514**, a determining unit **1516**, and a changing appearance unit **1518**.

In some embodiments, the processing unit **1208** is configured to: in accordance with the determination that the touch input satisfies the one or more criteria for entering the text selection mode: visually obscure keys on the onscreen keyboard (e.g., with the obscuring unit **1218**).

The processing unit **1508** is configured to: detect (e.g., with detecting unit **1510**) a touch input on the onscreen keyboard displayed on the touch-sensitive display. In some embodiments, detect (e.g., with detecting unit **1510**) the touch input includes detect (e.g., with detecting unit **1510**) movement of a contact and liftoff of the contact. The processing unit **1508** is also configured to: in response to detecting the touch input on the onscreen keyboard displayed on the touch-sensitive display, in accordance with a determination (e.g., with determining unit **1516**) that the touch input satisfies text-selection criteria, the text-selection criteria include a criterion that is met when a characteristic intensity of the contact increases above a text-selection intensity threshold, perform a text selection operation (e.g., with selecting unit **1512**) based on the movement of the contact. Conversely, in accordance with a determination (e.g., with determining unit **1516**) that the touch input satisfies text-entry criteria, the text-entry criteria include a criterion that is met when the characteristic intensity of the contact does not increase above the text-selection intensity threshold, the processing unit **1508** is configured to enter text into the content presentation region based on the touch input.

In some embodiments, the text-entry criteria include a criterion that is met when the liftoff of the contact is detected while the contact is at a location of a character key of the onscreen keyboard.

In some embodiments, the text-entry criteria include a criterion that is met when the contact does not move outside of the onscreen keyboard before liftoff of the contact is detected.

In some embodiments, enter the text into the content region includes enter a character that corresponds to character key at a location at which touchdown of the contact was detected on the onscreen keyboard.

In some embodiments, enter the text into the content region includes enter a character that corresponds to character key at a location at which liftoff of the contact was detected on the onscreen keyboard.

In some embodiments, the text-selection criteria include a criterion that is met when the contact does not move more than a threshold distance before detecting an increase in the characteristic intensity of the contact above the text-selection intensity threshold.

In some embodiments, the text-selection operation includes one of: moving a cursor within the content region or selecting text within the content region.

In some embodiments, the processing unit **1508** is configured to, in response to detecting that the text-selection criteria have been met, generate a tactile (e.g., with tactile output generator(s) **167**, FIG. **2**A or tactile output generator (s) **257**, FIG. **2**B) output that is indicative of an entry into a text selection mode of operation.

In some embodiments, the processing unit **1508** is configured to, in response to detecting that the text-selection criteria have been met, change an appearance (e.g., with changing appearance unit **1518**) of the onscreen keyboard to indicate that the device is operating in a text selection mode of operation. In some embodiments, change the appearance (e.g., with changing appearance unit **1518**) of the onscreen keyboard includes obscure an appearance (e.g., with changing appearance unit **1518**) of characters on keys of the onscreen keyboard.

In some embodiments, the processing unit **1508** is configured to end the text selection mode of operation and, in conjunction with the end of the text selection mode of operation, reverse the change in appearance (e.g., with changing appearance unit **1518**) of the onscreen keyboard to reveal the characters on the keys of the onscreen keyboard.

In some embodiments, the processing unit **1508** is configured to, when the touch input satisfies the text-selection criteria, detect (e.g., with detecting unit **1510**) movement of the contact after the touch input has satisfied the text-selection criteria and move (e.g., with moving unit **1514**) a cursor in the content region in accordance with the movement of the contact detected after the touch input has satisfied the text-selection criteria.

In some embodiments, the processing unit **1508** is configured to, when the touch input satisfies the text-selection criteria, detect (e.g., with detecting unit **1510**) a first subsequent change in the characteristic intensity of the contact followed by additional movement of the contact on the touch-sensitive display; and, in response to detecting the first subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input satisfies selection-start criteria, the selection-start criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-start intensity threshold, the processing unit **1508** is configured to start to select (e.g., with selecting unit **1512**) content in the content region at a location of a cursor in accordance with the additional movement of the contact. Conversely, in accordance with a determination (e.g., with determining unit **1516**) that the touch input does not satisfy the selection-start criteria, the processing unit **1508** is configured to move (e.g., with moving unit **1514**) the cursor in accordance with the additional movement of the contact without starting to select content in the content region.

In some embodiments, the processing unit **1508** is configured to: when the touch input satisfies selection-start criteria, after starting to select content in the content region, detect (e.g., with detecting unit **1510**) liftoff of the contact from the touch-sensitive display and confirm the selection (e.g., with selecting unit **1512**) in response to detecting the liftoff of the contact.

In some embodiments, the processing unit **1508** is configured to: when the touch input satisfies selection-start criteria, after starting to select content in the content region, and while continuing to detect (e.g., with detecting unit **1510**) the contact on the touch-sensitive display, detect (e.g., with detecting unit **1510**) a second subsequent change in intensity of the contact. In response to detecting the second subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the second subsequent change in the characteristic intensity of the contact satisfies selection-cancellation criteria, the selection-cancellation criteria include a criterion that is met when the characteristic intensity of the contact increases above a selection-cancellation intensity threshold, the processing unit **1508** is configured to cancel the selection (e.g., with selecting unit **1512**). Conversely, in accordance with a determination (e.g., with determining unit **1516**) that the second subsequent change in the characteristic intensity of the contact does not satisfy the selection-cancellation criteria, the processing unit **1508** is configured to maintain the selection (e.g., with selecting unit **1512**).

In some embodiments, the selection-cancellation criterion include a criterion that is met when the contact moves no more than a threshold distance within a threshold amount of time before the characteristic intensity of the contact increases above the selection-cancellation intensity threshold.

In some embodiments, the processing unit **1508** is configured to, in response to detecting that the selection-cancellation criteria have been met, generate a tactile (e.g., with tactile output generator(s) **167**, FIG. **2**A or tactile output generator(s) **257**, FIG. **2**B) output that is indicative of an exit from the text selection mode of operation.

In some embodiments, the processing unit **1508** is configured to: after canceling the selection, and while continuing to detect (e.g., with detecting unit **1510**) the contact on the touch-sensitive display, detect (e.g., with detecting unit **1510**) a third subsequent change in the characteristic intensity of the contact. In response to detecting the third subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input satisfies the selection-start criteria, the processing unit **1508** is configured to start to select (e.g., with selecting unit **1512**) content in the content region at a location of the cursor. Conversely, in accordance with a determination (e.g., with determining unit **1516**) that the touch input does not satisfy the selection-start criteria, the processing unit **1508** is configured to forgo starting to select content (e.g., with selecting unit **1512**) in the content region.

In some embodiments, start to select (e.g., with selecting unit **1512**) content in response to detecting the third subsequent change in the characteristic intensity of the contact includes select (e.g., with selecting unit **1512**) a respective word at the location of the cursor.

In some embodiments, the selected respective word is a first word, and the processing unit **1508** is configured to, while the first word is selected, detect (e.g., with detecting unit **1510**) first subsequent movement of the contact. In response to detecting the first subsequent movement of the contact while the first word is selected, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets selection-movement criteria which includes a movement criterion that is met when the contact move (e.g., with moving unit **1514**)s more than a respective threshold amount, the processing unit **1508** is configured to cancel selection (e.g., with selecting unit **1512**) of the first word, and select (e.g., with selecting unit **1512**) a second word that is adjacent to the first word in a first direction in accordance with the first subsequent movement of the contact, such that the selected respective word is the second word.

In some embodiments, the processing unit **1508** is configured to, while the respective word is selected, detect (e.g., with detecting unit **1510**) first subsequent movement of the contact. In response to detecting the first subsequent movement of the contact while the respective word is selected, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact moves more than a respective threshold amount, the processing unit **1508** is configured to expand the selection (e.g., with selecting unit **1512**) to include a word that is adjacent to the respective word in a first direction in accordance with the first subsequent movement of the contact.

In some embodiments, the processing unit **1508** is configured to, while the respective word is selected, detect (e.g., with detecting unit **1510**) a fourth subsequent change in the characteristic intensity of the contact above a respective intensity threshold. In response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, the processing unit **1508** is configured to cancel selection (e.g., with selecting unit **1512**) of the respective word.

In some embodiments, the processing unit **1508** is configured to, while the respective word is selected, detect (e.g., with detecting unit **1510**) a fourth subsequent change in the characteristic intensity of the contact above a respective intensity threshold. In response to detecting the fourth subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets sentence-selection criteria which include a movement criterion that is met when the contact move (e.g., with moving unit **1514**)s less than a threshold amount within a threshold time period before the fourth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the third subsequent change in the characteristic intensity of the contact is detected and when the fourth subsequent change in the characteristic intensity of the contact is detected is less than a delay threshold, the processing unit **1508** is configured to expand the selection (e.g., with selecting unit **1512**) to include the respective sentence that contains the respective word.

In some embodiments, the processing unit **1508** is configured to, while the respective sentence is selected, detect (e.g., with detecting unit **1510**) second subsequent movement of the contact. In response to detecting the second subsequent movement of the contact while the respective sentence is selected, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact move (e.g., with moving unit **1514**)s more than a respective threshold amount, the processing unit **1508** is configured to expand the selection (e.g., with selecting unit **1512**) to include a sentence that is adjacent to the respective sentence in a first direction in accordance with the second subsequent movement of the contact.

In some embodiments, the respective sentence is selected in response to the fourth subsequent change in the characteristic intensity of the contact and the processing unit **1508** is configured to, while the respective sentence is selected: detect (e.g., with detecting unit **1510**) a fifth subsequent change in the characteristic intensity of the contact above the respective intensity threshold. In response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets the selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, the processing unit **1508** is configured to cancel selection (e.g., with selecting unit **1512**) of the respective sentence.

In some embodiments, the processing unit **1508** is configured to, in response to detecting the fifth subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets paragraph-selection criteria which include a movement criterion that is met when the contact move (e.g., with moving unit **1514**)s less than the threshold amount within the threshold time period before the

fifth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fourth subsequent change in the characteristic intensity of the contact is detected and when the fifth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, the processing unit **1508** is configured to expand the selection (e.g., with selecting unit **1512**) to include the respective paragraph that contains the respective sentence.

In some embodiments, the processing unit **1508** is configured to, while the respective paragraph is selected, detecting third subsequent movement of the contact. In response to detecting the third subsequent movement of the contact while the respective paragraph is selected, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets selection-expansion criteria which includes a movement criterion that is met when the contact move (e.g., with moving unit **1514**)s more than a respective threshold amount, expand the selection (e.g., with selecting unit **1512**) to include a paragraph that is adjacent to the respective paragraph in a first direction in accordance with the third subsequent movement of the contact.

In some embodiments, the respective paragraph is selected in response to the fifth subsequent change in the characteristic intensity of the contact and the processing unit **1508** is configured to, while the respective paragraph is selected, detect (e.g., with detecting unit **1510**) a sixth subsequent change in the characteristic intensity of the contact above the respective intensity threshold. In response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets selection-cancellation criteria, which includes a criterion that is met when the amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is greater than the delay threshold, the processing unit **1508** is configured to cancel selection (e.g., with selecting unit **1512**) of the respective paragraph.

In some embodiments, the processing unit **1508** is configured to, in response to detecting the sixth subsequent change in the characteristic intensity of the contact, in accordance with a determination (e.g., with determining unit **1516**) that the touch input meets document selection criteria which include a movement criterion that is met when the contact move (e.g., with moving unit **1514**)s less than the threshold amount within the threshold time period before the sixth subsequent change in intensity of the contact was detected and a time criterion that is met when an amount of time between when the fifth subsequent change in the characteristic intensity of the contact is detected and when the sixth subsequent change in the characteristic intensity of the contact is detected is less than the delay threshold, the processing unit **1508** is configured to expand the selection (e.g., with selecting unit **1512**) to include the respective document that contains the respective paragraph.

The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best use the invention and various described embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A method of selection manipulation, comprising:

at a portable multifunction device including one or more processors, memory, and a touch screen display:

displaying content of an electronic document on the display;

detecting a selection input corresponding to selection of a respective portion of the content;

in response to detecting the selection input, changing an appearance of the respective portion of the content to indicate that the respective portion of the content has been selected, wherein the respective portion of the content that has been selected comprises selected content;

while displaying the selected content with the changed appearance, detecting a single touch input on the touch screen display at a location over the selected content; and

in response to detecting the single touch input at the location, in accordance with a determination that the single touch input remains, during a first portion of the single touch input, at the location for a predetermined amount of time, followed, during a second portion of the single touch input, by a continuous touch gesture away from the location, moving a representation of the selected content to a different location in a direction of the continuous touch gesture, wherein the representation of the selected content is an additional representation of the selected content, and moving the additional representation of the selected content includes moving the additional representation of the selected content offset from the selected content in a direction of the continuous touch gesture to indicate a position to where the selected content will be moved when the continuous touch gesture terminates.

2. The method of claim **1**, wherein displaying the selected content with the changed appearance includes concurrently displaying a start-point object and an end-point object at respective ends of the selected content.

3. The method of claim **2**, wherein the additional representation of the selected content includes an additional start-point object and an additional end-point object different from the start-point object and the end-point object of the selected content.

4. The method of claim **1**, wherein the additional representation of the selected content has a different appearance from the selected content with the changed appearance.

5. The method of claim **1**, further including, in response to detecting the selection input, concurrently displaying the selected content with the changed appearance and a set of options related to the selected content, wherein the set of options related to the selected content includes a first affordance for cutting the selected content and a second affordance for copying the selected content.

6. The method of claim **5**, wherein the set of options related to the selected content includes a third affordance for pasting a previously cut or copied selection of content.

7. The method of claim **5**, wherein the set of options related to the selected content includes an affordance for displaying additional command options, or an affordance for presenting a definition of a word in the selected content.

8. The method of claim **1**, wherein determining if the single touch input remains at the location for the predeter-

mined amount of time includes determining that the single touch input moves no more than a threshold distance within a threshold amount of time.

9. An electronic device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying content of an electronic document on the display;

detecting a selection input corresponding to selection of a respective portion of the content;

in response to detecting the selection input, changing an appearance of the respective portion of the content to indicate that the respective portion of the content has been selected, wherein the respective portion of the content that has been selected comprises selected content;

while displaying the selected content with the changed appearance, detecting a single touch input on the touch screen display at a location over the selected content; and

in response to detecting the single touch input at the location, in accordance with a determination that the single touch input remains, during a first portion of the single touch input, at the location for a predetermined amount of time, followed, during a second portion of the single touch input, by a continuous touch gesture away from the location, moving a representation of the selected content to a different location in a direction of the continuous touch gesture, wherein the representation of the selected content is an additional representation of the selected content, and moving the additional representation of the selected content includes moving the additional representation of the selected content offset from the selected content in a direction of the continuous touch gesture to indicate a position to where the selected content will be moved when the continuous touch gesture terminates.

10. The electronic device of claim **9**, wherein displaying the selected content with the changed appearance includes concurrently displaying a start-point object and an end-point object at respective ends of the selected content.

11. The electronic device of claim **10**, wherein the additional representation of the selected content includes an additional start-point object and an additional end-point object different from the start-point object and the end-point object of the selected content.

12. The electronic device of claim **9**, wherein the additional representation of the selected content has a different appearance from the selected content with the changed appearance.

13. The electronic device of claim **9**, wherein the one or more programs include instructions for, in response to detecting the selection input, concurrently displaying the selected content with the changed appearance and a set of options related to the selected content, wherein the set of options related to the selected content includes a first affordance for cutting the selected content and a second affordance for copying the selected content.

14. The electronic device of claim **13**, wherein the set of options related to the selected content includes a third affordance for pasting a previously cut or copied selection of content.

15. The electronic device of claim **13**, wherein the set of options related to the selected content includes an affordance for displaying additional command options, or an affordance for presenting a definition of a word in the selected content.

16. The electronic device of claim **9**, wherein determining if the single touch input remains at the location for the predetermined amount of time includes determining that the single touch input moves no more than a threshold distance within a threshold amount of time.

17. A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by an electronic device with a touch screen display, cause the electronic device to:

display content of an electronic document on the touch screen display;

detect a selection input corresponding to selection of a respective portion of the content;

in response to detecting the selection input, change an appearance of the respective portion of the content to indicate that the respective portion of the content has been selected, wherein the respective portion of the content that has been selected comprises selected content;

while displaying the selected content with the changed appearance, detect a single touch input on the touch screen display at a location over the selected content; and

in response to detecting the single touch input at the location, in accordance with a determination that the single touch input remains, during a first portion of the single touch input, at the location for a predetermined amount of time, followed, during a second portion of the single touch input, by a continuous touch gesture away from the location, move a representation of the selected content to a different location in a direction of the continuous touch gesture, wherein the representation of the selected content is an additional representation of the selected content, and moving the additional representation of the selected content includes moving the additional representation of the selected content offset from the selected content in a direction of the continuous touch gesture to indicate a position to where the selected content will be moved when the continuous touch gesture terminates.

18. The non-transitory computer readable storage medium of claim **17**, wherein displaying the selected content with the changed appearance includes concurrently displaying a start-point object and an end-point object at respective ends of the selected content.

19. The non-transitory computer readable storage medium of claim **18**, wherein the additional representation of the selected content includes an additional start-point object and an additional end-point object different from the start-point object and the end-point object of the selected content.

20. The non-transitory computer readable storage medium of claim **17**, wherein the additional representation of the selected content has a different appearance from the selected content with the changed appearance.

21. The non-transitory computer readable storage medium of claim **17**, wherein the one or more programs include instructions, which when executed by the electronic device, cause the electronic device to respond to detecting the

selection input by concurrently displaying the selected content with the changed appearance and a set of options related to the selected content, wherein the set of options related to the selected content includes a first affordance for cutting the selected content and a second affordance for copying the selected content.

22. The non-transitory computer readable storage medium of claim **21**, wherein the set of options related to the selected content includes a third affordance for pasting a previously cut or copied selection of content.

23. The non-transitory computer readable storage medium of claim **21**, wherein the set of options related to the selected content includes an affordance for displaying additional command options, or an affordance for presenting a definition of a word in the selected content.

24. The non-transitory computer readable storage medium of claim **17**, wherein determining if the single touch input remains at the location for the predetermined amount of time includes determining that the single touch input moves no more than a threshold distance within a threshold amount of time.

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